RMS Journal

River Management Society

Supporting Professionals Who Study, Protect, and Manage North America's Rivers

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ALASKA FOCUS

Dolly Varden captured on Hulahula River. Photo: John Carlson

Dragging the Hulahula

by Greta Burkart and David Payer

At 4 am the midnight sun peaked through the lifting fog, revealing the Hulahula Valley in Alaska's Brooks Range. For a moment we stopped dragging our boats and looked around. We found ourselves in the middle of a shallow, braided section of the river. It was early June, a time when the river is usually high with snowmelt, but we were surrounded by shallow riffles inadequate to floatour heavily loaded boats.

The Hulahula River originates on the north side of the continental divide in the Arctic National Wildlife Refuge, flowing from hanging valley glaciers in some of the highest peaks of the Brooks Range. In its nearly 100-mile descent it flowsnorth from these steep-walled glacial headwaters, through rolling foothills, across the Arctic Coastal Plain and into the Beaufort Sea. In the process it traverses designated Wilderness, the infamous "1002 Area", and Alaska Native corporation lands.

We had scouted the river the previous day while flyingto our put-in site, noting a complete lack of flowin some of the main tributaries. As a result, the river was clear and low, especially in the wide braided sections -- it was obvious that the glaciers were not melting because of unseasonably cold weather. What was not so obvious was how we were going to floatit in our heavily loaded boats, including a 14' raft and a 16' inflatablecanoe. Ironically, the purpose of our trip was to assess the potential impacts of glacier loss on ecosystems from headwater streams to rivers and coastal estuaries.

Most watersheds in the Brooks have very little glacial influence;therefore, the Hulahula and a few surrounding watersheds are unique in that a significantportion of their late summer flowis derived from glacial meltwater. Glaciers in this region are rapidly melting and are likely to disappear within the next 50 years (Nolan et al. 2011). As glaciers disappear, changes to downstream ecosystems will likely include lower river flow,loss of hydraulic connectivity, and lack of turbidity, similar to what we witnessed from the plane. Loss of the mid- to late-summer glacial meltwater could also affect the survival of fishes, diversity of aquatic insects, community composition of floodplainvegetation, shape and navigability of river channels, formation of river deltas, food availability for migratory birds, and energy sources for estuarine food webs.

Our plan was to start in the mountains and floatto the coast, collecting samples along the way. Our research team,

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River Management Society

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Executive Director's *Eddy*

Change.

While it challenges our penchant for routine and comfort, it also provides the basis for what we can enjoy as exciting and vibrant. RMS 'change' initiatives are many this year, but the earliest tangible example is our new website: same address but with a different look, more current feel and increased functionality.

When visiting the 'new' www.river-management.org you should see the opportunities it provides as a vehicle to share the changing face of river management. Most important is that the site can be kept current easily, to best reflectyour interests as a member, or part of an organization that has chosen to join on behalf of several members.

Just a few talents of our new site include the following:

- You can update your personal profile, and when you renew your membership online you won't have to wait days for processing to occur – your filewill be updated immediately.
- You can start a 'circle' of members who can converse on specifictopics of interest.
- You (with chapter-approved access) can post events or news, and you can submit additions to site pages that you think might need an update.

New, exciting features are planned, too, so stay tuned for updates! If you get to the site and have a question about the new configuration,don't ask me! Just kidding. Feel free to email executivedirector@river-management.org or call 301-585-4677 and I'll try my best to answer your question, or ask for assistance from our site experts to do so.

This site has taken a year to put together, and would have not happened without the assistance of our members. The choice for our site vendor was made by our 2011 Website Committee members Scott Boyer (UT), Judy Culver (ID), Brenda Adams Weyant (PA) and Chet Crowser (MT): please join me in thanking them if you have an opportunity to do so. During the last few weeks our stalwart listserve archivist Jennifer MacDonald has been charging at the task of transferring all listserve conversations (i.e., cutting and pasting them, one by one) from the old site to new. Thanks, Jen!

Finally, the unsung hero of our website past and current is Chet Crowser, who has allayed my fears countless times and has slogged through the preparation with amazing optimism. If I've missed something he's righted it. RMS cannot thank him enough for his brain power, cheerful attitude and willingness to abandon his wife and three young children to help out.

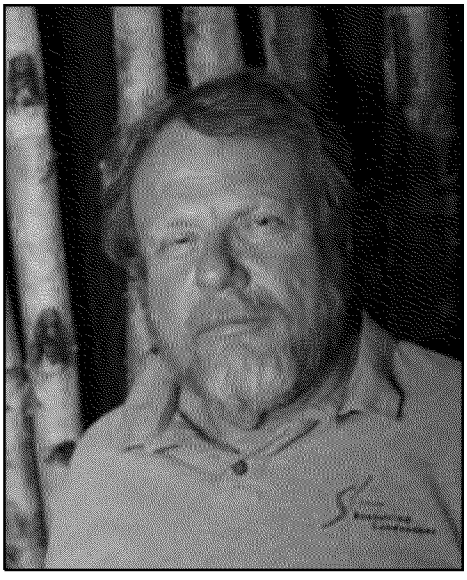
As we have embraced the opportunity to continue to change, looking to our website as a hub for communication, we hope you'll view it as an increasingly helpful professional tool. We also embrace what has not changed in our RMS volunteers – their interest and generosity – and thank them endlessly.

Can't wait to see y'all in Asheville in April! Early registration data indicates that we'll see many new faces, as well as folks who have been quiet since the Charleston Symposium a decade ago! ◆

Risa Shimoda
RMS Executive Director

From the *President*

Dancing through the Zombie Apocalypse



Last November I had the opportunity to present at the River Rendezvous in Moab. There was good RMS presence and participation. We were even able to recruit a few new members. When approached by the organizers I asked them what they wanted me to talk about for 45 minutes. They suggested current and upcoming threats to the Green River. Certainly no shortage of threats to address – a proposed nuclear power plant, numerous new proposed straws sucking out of the river, a couple of trans basin diversions and a few bad dam projects. Having been around these parts for nearly 40 years I had seen most of them before when they came around in the 1980's. We killed them off then, but they have come back to life. It occurred to me that threats to our river systems are like zombies.

In most horror genre; you have to DO something to bring on the monster. You have to desecrate the mummy's tomb, occupy the haunted house, or invite the vampire in. In scores of teen slasher flicks loss of virginity leads to loss of life. With zombies it is different. You are minding your own business and one shows up on your doorstep. You dispatch that one and fivemore show up. The one you thought was down for the count gets back up and comes at you again. You don't hunt them like vampires or Godzilla; they findyou. They are relentless and you are never sure they are all gone.

Rather than address the threats, I took the time to celebrate the successes and progress that we have made. Improved flowregimes resulting from better dam operations have resulted in endangered fishdoing a little bit better. Habitats have been restored, native vegetation propagated, invasive species beat back, native wildlife flourishesand beaches restored. Along with on the ground improvements in ecological condition basic research and science have expanded our knowledge of the river and its related cultural and natural resources. Knowledge is a valuable and powerful commodity; not to mention fresh bullets for the zombie gun.

It is thanks to dedicated professionals in a dozen or more river related fields that we can share and rejoice in solid accomplishments. In the pages of every issue of this Journal there are lessons learned and good news to be share. RMS provides a venue where geomorphologists commune with fisheriesbiologists and archaeologists to improve collective understanding of our river systems. There is progress. More dams come down than are being built. Cities across the land are day lighting streams that have been in buried culverts for over 100 years. River trails and restorations are an increasingly important part of urban landscapes.

The RMS Biennial Symposium in Asheville, NC will be a great celebration of all things river. I am proud to report our Scholarship Committee has awarded scholarships to all eight members who applied to attend the symposium. At the direction of the Executive Committee, the Scholarship Committee will be changing its focus. It will still grant scholarships to professional members to attend training, conferences and river related events. Its duties will expand to cover more aspects of professional development like mentoring and internship programs. Scholarships will remain important and if you need help to attend an event or acquire training, I urge you to access this great member benefit.

The threats to our rivers are not going away. Demands on rivers and conflicts over resources are going to occupy the time of much of our membership. RMS is rising to the occasion. Last fall, we supported an amicus brief to the US Supreme Court over the ownership of rivers. We do not engage in advocacy or litigation lightly, but this was a case where we simply needed to stand up and be counted. When you fightzombies, you need your friends. No better place than RMS to findsupportive, friendly river professionals.

Excuse me, got some friends together and we have to go address a nuke plant proposal. It is getting better. In 1980, they wanted fivenuke plants on the Green River. This time they only want one, for now.◆

Dennis Willis
RMS President

The Path to Stewardship *Starts* with Understanding

by Bruce James

When a community understands the unique environment that surrounds it, they are more likely to place value in its preservation. This is the firststep on the path to stewardship.

As the Executive Director of Wrangell Institute for Science and Environment (WISE), I am tasked with providing educational programs that build stewardship ethics in the citizens of the Copper River Basin. To accomplish this, WISE has designed an annual schedule of programs that engage youth and young adults in outdoor activities that are fun and educational.

After pulling our nets, students always dissect a couple trout.

Our firstmajor event of the spring is a full day of presentations to all the 4-5-6th graders in the school district. Each grade gets four different programs that cover topics of local environmental interest. This has always been a successful event but it morphed to the next level when I was contacted by a local youth organization. They wanted to present ATV safety but that doesn't match our objectives for the event. Further discussion resulted in an agreement when they added "responsible ATV use" to the curriculum. To make it better, the youths in that group did the presentation instead of the adults and it was so well received by the participants that we have begun findingother opportunities to have youths lead our presentations.

One of our most successful programs is our Aquatic Ecology Camps. This two-day event exposes teenagers to the delicate balance of water quality and habitat while the kids are pretending to be Fisheries Biologists. Along the way we visit several lakes and streams and perform water chemistry tests to determine if that water can support fish.We also get a permit from the state to place minnow traps and fishnetsinto the waterways to further demonstrate the responsibilities of biologists. These activities encourage youths to consider outdoor careers and to stay in school to accomplish these goals.

Fun is always a big part of our programs and at the Ecology Camp we spend time discussing water safety prior to going out in row boats. One youth rows (trolls) while the other trails a lure far behind the boat. I get a laugh every time as the course over the water looks like an NFL running back being chased by a whole mob of defenders. Because the trout are dependable, however, we always catch some and then the kids trade places. I actually think they enjoy the rowing more than the fishing! And if the weather conditions are favorable, we also let them do some supervised swimming. This is a real treat for our kids because in this part of Alaska, opportunities to go swimming are very limited. In the evening, the kids enjoy the usual S'mores around the campfire and we use this time to review what we learned earlier in the day.

The next morning we set up a stream table to demonstrate the effects of erosion and man's feeble attempts to control it. The first activity is to let them place a small house anywhere on the table. Of course, they always choose a spot next to the stream and within a few minutes of starting the water flow,their dream homes are washing into the water. We next encourage them to findways to control the erosion and these attempts always fail. Finally, we show them how a natural stream allows logjams and debris to build up, thus slowing the current down and minimizing the erosion. Another demonstration is how perched culverts prevent fishpassage and cause roadway damage.

WISE also conducts several other programs each year to promote understanding and stewardship of our environment. The schedule starts out with ice fishingduring spring break, youth hikes and campouts during the summer and a Wounded Warrior weekend in late August. Each of these events are designed around pleasurable activities with a sprinkling of environmental education mixed in for good measure.

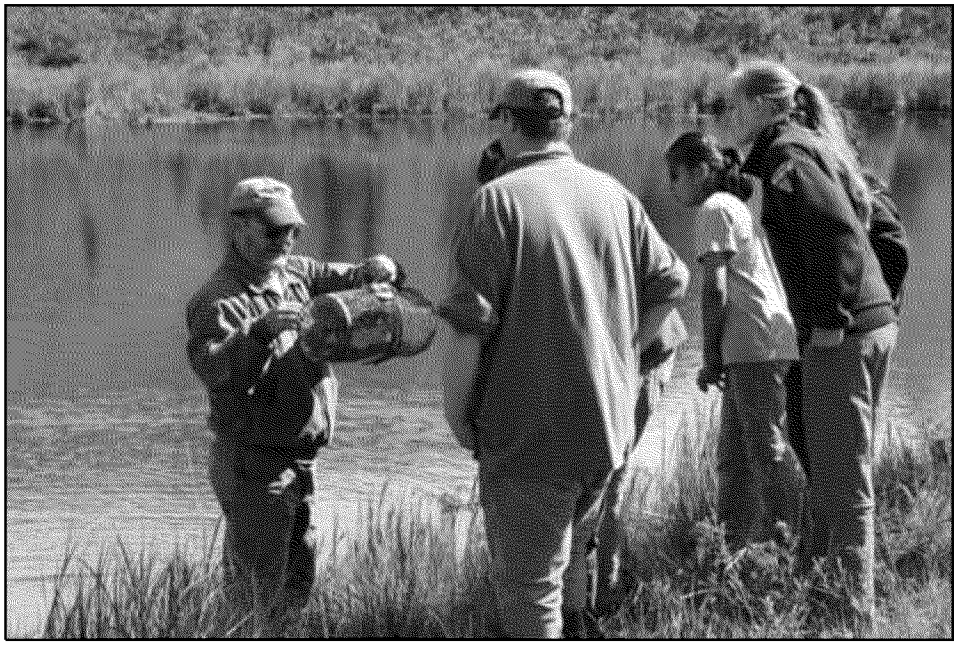
Our finalregular event is the Copper River Stewardship Program where ten

high school students are taken on a journey through our unique watershed. Along with a multi-day raft trip down one of our many rivers, we expose them to the many adverse threats our watershed faces. It is our goal that some of these youth would become the next generation of land managers to help preserve what we currently enjoy.

Finally, WISE also partners with a local research project that is studying the dynamics of a small stream that seems to be drying up. Last year, two interns were hired to perform the many duties associated with this kind of research and they gained valuable experience in the process.

As a comparatively small non-profit,how does WISE accomplish all these great programs? First, we stay distinctly focused on our mission and have passionate volunteers who contribute their valuable time and resources. Next, we have developed partnerships with other "like-minded" organizations and agencies. In particular, we have great relationships with our local BLM and NPS officesand the Copper River Watershed Project. With their financialand in-kind support we have accomplished many great things!
In my opinion, there is no stronger tool to help preserve a specificenvironment than a community that has adopted a stewardship ethic towards it. Encouraging that ethic is everyone's responsibility if they want to protect what is special to us.

For more information on Wrangell Institute for Science and Environment, see our website at www.wise-edu.org and join us on Facebook. ◆



Top: Minnow traps are placed in the watershed to capture small salmon that have not yet migrated to salt water.

Middle: Youths are exposed to traditional river usages. Here, they learn about Ahtna fishcamps.

Bottom: Our research program is studying a small stream that seems to be drying up.

All photos courtesy of WISE volunteers.

Alaska Rivers and Recreationalists *Benefit* from 75 Year Old Program

by Mary Price

Americans enjoy endless opportunities to particip fishing,hunting and experiencing wildlife, thanks to a dedicated visionaries in the early 1900's. Decades of dwindling fishand wildlife populations compelled this group of America's sportsmen, naturalists, businessmen, and politicians to develop an innovative system for the effective conservation of the nation's fishand wildlife legacies. Given that the country was still reeling from the Great Depression, it is incredible that the Federal Aid in Wildlife Restoration Act was written and passed by Congress and signed by President Franklin D. Roosevelt in 1937. Referred to as the Pittman-Robertson Act in honor of its sponsors, this radical, unprecedented law paved the way for stable, secure funding for wildlife conservation across the nation, by using excise taxes on the sale of sporting guns and ammunition.

This Act fostered partnerships among federal and state fish and wildlife agencies, the sporting arms industry, conservation groups, and sportsmen and sportswomen to benefitwildlife. In 1950 a second piece of landmark legislation, the Federal Aid in Sport Fish Restoration Act (referred to as Dingell-Johnson Act after its sponsors), was passed. This Act brings revenue to sport fish conservation efforts through excise taxes on sport fishingequip - ment and import duties on fishingtackle, yachts, and pleasure craft; plus a portion of the gasoline fuel tax attributable to small engines and motorboats.

This year marks the 75th anniversary of the Wildlife and Sport Fish Restoration (WSFR) program (now considered two parts of a common effort). It is the cornerstone of conservation in this country, founded on a multi-billion dollar investment by this nation's hunters, anglers, and boaters. Since the program began, more than $13 billion has been generated for fishand wildlife conservation in the U.S.; more than has been raised by any other single conservation effort. The U.S. Fish and Wildlife Service manages the distribution of funds, which are apportioned back to the states. In Alaska, these go to the Alaska Department of Fish and Game (ADF&G) for projects to restore, conserve, manage, and enhance fishand wildlife and their habitat; provide public use and access to fishand wildlife resources; and provide for aquatic and hunter education, and the development of shooting ranges. States contribute a 25% match, generally using money that comes from fishingand hunting license sales. It is a user pay, user ben- efitprogram.

Alaska's fishes,aquatic ecosystems, and the recreational us - ers of Alaska's rivers directly reap the benefitsresulting from the many WSFR/ADF&G-funded projects and programs. If you're enjoying an Alaska river, chances are you're there to fish,hunt, view wildlife, go boating, or engage in a combination of these activities. ADF&G programs support all of these and more.

Through the WSFR, ADF&G receives more than $30 million annually. WSFR funds help pay for dozens of sport fishmanage - ment, research, survey, and inventory projects each year; as well as supporting sport fishhatchery operations, all of which help en - sure abundant and productive fishingopportunities now and into the future. Maintaining these healthy fishpopulations requires adequate water quality and instream flows.ADF&G staffers work to conserve aquatic habitat in these times of ever increas- ing water-related development demands. They submit water right applications to the Alaska Department of Natural Resources to protect sport fisheryresources and waterway access to sport fish - ing opportunities. They also review proposed and existing water

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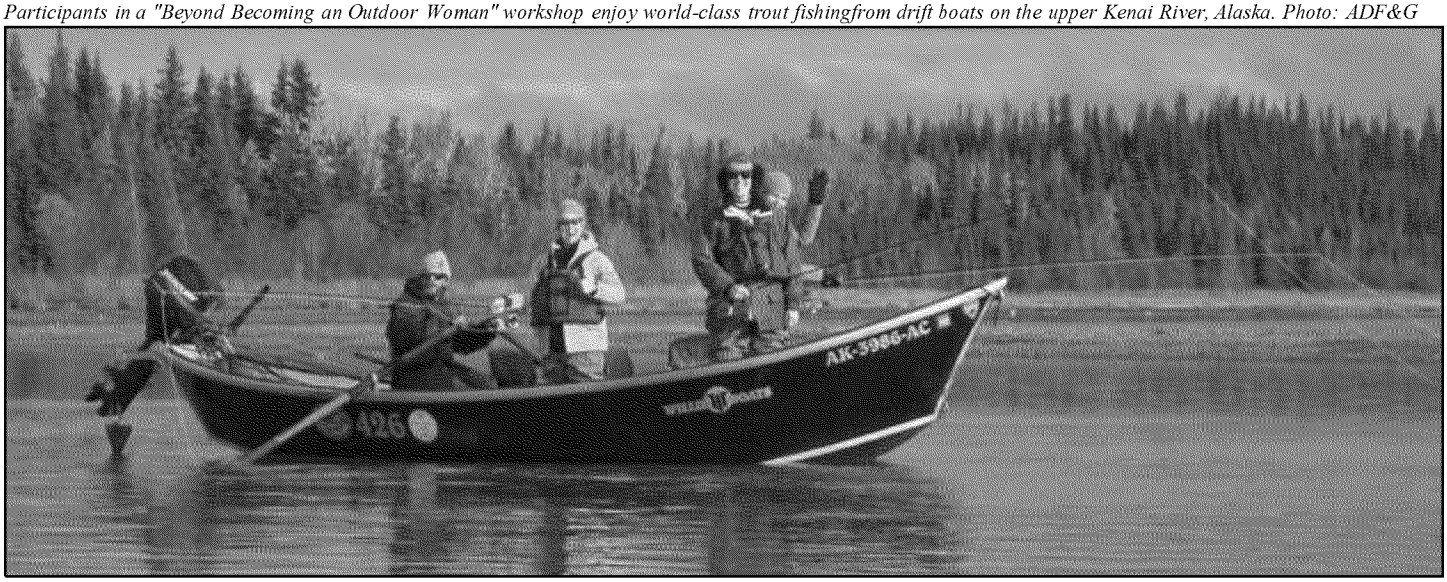
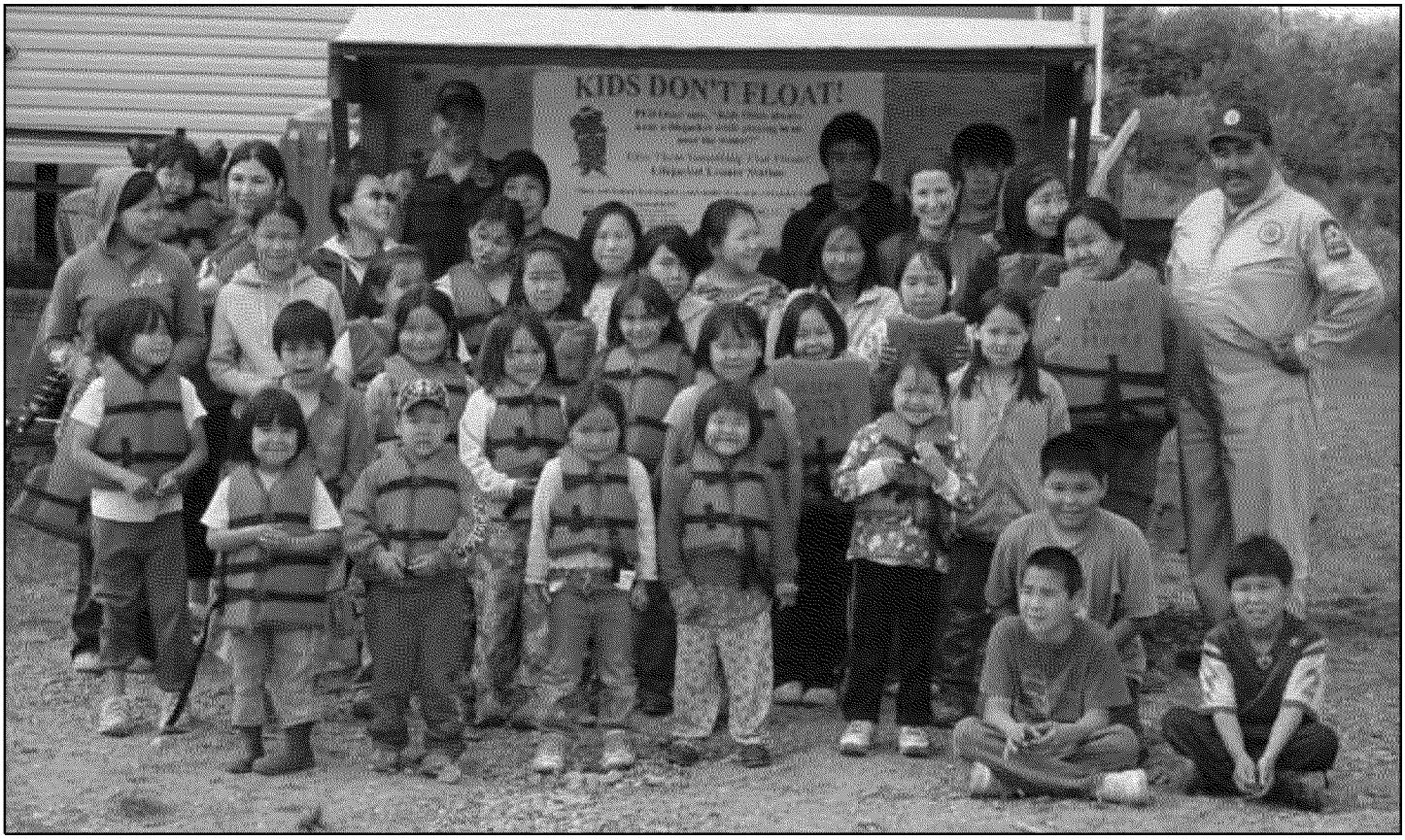
Participants in a "Beyond Becoming an Outdoor Woman" workshop enjoy world-class trout fishingfrom drift boats on the upper Kenai River, Alaska. Photo: ADF&G





Kids Don't Float station in Napakiak, Alaska.

Alaska Boating Safety Program: Boat *smart*. Boat *safe*.

by Joseph McCullough

The Great Land is a paradise – albeit a chilly paradise – for sports enthusiasts. Insiders will tell you there's no better fishing state; from halibut to salmon to steelhead, Alaska has it all. As for boating, that's world class too, with opportunities ranging from classic whitewater to serene coastal lagoons. There are over three million lakes, 3,000 rivers and more shoreline than the rest of the Lower 48 combined. However, Alaska also has the dubious distinction of owning one of the highest boating fatality rates in the nation. Five out of six of Alaska's boating fatalities are a result of a capsize or a fall overboard. Furthermore, most of the fatalities involve middle-aged men in a vessel less than 26 feet, who aren't wearing a life jacket when they're dumped into water. Alaska's cold water and remote settings when combined with being unprepared are risk factors that significantlyreduce the odds of surviving a boating accident in Alaska.

Most of the states in an effort to deal with their own fatality rates had developed an established boating program by 1965. By 1988, Alaska was the only state without a program despite several efforts to enact comprehensive boating safety legislation in the 49th state. In 1998, Alaska's Officeof Boating Safety was established within the Division of Parks and Outdoor Recreation. Shortly thereafter, the Alaska Boating Safety Act was drafted and introduced in the 1999 legislative session by Representative Bill Hudson. When Governor Tony Knowles signed HB 108 into law in May 2000, Alaska became the last of the 50 states and six US Territories to establish a state boating safety program and qualify for its share of the federal grant funds available to the states for boating safety. Both these federal funds and Alaska's boat registration receipts now remain in Alaska, to the benefitof boaters and the state's economy.

Most Alaskans know a significantamount about boating, but where knowledge is lacking is in understanding, or being aware of, the real risks involved with boating on cold water. The other gap is that few Alaskans have attended a boating safety class, mirroring national data. Statistics show that most who die in a boating accident had not taken a boating safety course.

Because Alaska's Boating Safety Program is so small compared to most other states, maintaining dynamic and productive partnerships is critical to continued success. The program partners with the U.S. Coast Guard, the U.S. Coast Guard Auxiliary, other state agencies, and boating organizations to maximize delivery of educational components and avoid to duplication of effort. Alaska also works closely with other states and actively participates in regional and national boating organizations in the ongoing effort to identify and adopt the best practices of other boating programs, maximize resources and increase program quality, productivity and effectiveness.

Since the time the Alaska Officeof Boating Safety was established the officehas worked with its partners with the intended purpose of improving boater behaviors, reducing boating deaths, injuries and property damage, and enhancing the enjoyment of Alaska's waterways. Since then Alaska has seen the state fatality rate drop over 20 percent. The Office

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An Alarming Precedent: Mining Through a *Wild* Salmon Stream in Alaska's Cook Inlet

by Dennis Gann

Alaska is known as the 'Last Frontier' for its vast wilderness, free-flowing rivers, abundant wildlife and healthy wild salmon runs. Alaska is also known for its long history of mining, beginning in the mid-1800's with picks and shovels, and progressing today to massive projects that remove tons of materials by the minute. With increasing demand from booming Asian economies driving high mineral and coal prices, Alaska is seeing record-high interest in new mining exploration and permitting. This trend is now aggravating conflictsover the best use of Alaska's vast natural resources.

Nowhere is this conflictmore apparent than in the Chuitna River watershed, on the Upper west side of Cook Inlet. There, PacRim Coal is developing plans to strip mine coal on lands leased by the Alaska Mental Health Trust. In its efforts to send Alaska coal to China and other Asian countries, PacRim plans to completely remove over 11 miles of wild salmon spawning and rearing habitat to a depth of 350 feet. Never before has Alaska allowed a large mining operation to mine through an entire salmon stream, removing the streambed and disrupting the underlying hydrologic system. This alarming precedent has raised concerns from commercial fishinginterests, sportsmen, local property owners, Alaska Native Tribes and conservationists alike.

Leading local grassroots efforts is the Chuitna Citizens Coalition (CCC), comprised of local residents and landowners from the communities of Tyonek and Beluga, 45 miles west of Anchorage, in the Chuitna watershed on the west side of Cook Inlet. Community members formed the CCC in 2007 when they learned of PacRim's plans to develop a coal strip mine in the headwaters of their local watershed. Recognizing the proposed strip mine is a direct threat to the health of the Chuitna watershed and the livelihood of their local Alaskan communities, the CCC has set out to educate the public, elected officialsand decision makers about the value of the Chuitna using the best available science to protect this valuable watershed.

Alaskans have a close personal relationship with wild salmon; they are woven deeply into our culture and our history, they feed our families, and they help definewho we are as Alaskans. Equally important, they provide tens of thousands of jobs, and generate billions in revenues across the state each year.

The Chuitna River, located just 45 miles west of Anchorage, is one of Alaska's special wild salmon rivers. The Chuitna runs 25 miles from the flanksof the Alaska Range and drains a complex system of bogs, lakes, ponds and marshes. The main stem of the Chuitna and more than a dozen tributaries drain the 130 square miles of the Chuitna watershed. While mostly known for its runs of King (Chinook) and Silver (Coho) salmon, all fivespecies of wild Alaskan salmon can be found in the river, in addition to three trout species. The Chuitna watershed also supports a host of shorebirds, moose, bear, wolves, beaver and other smaller mammals, making it a diverse and unique web of plant and animal life.

Middle Creek, one of the primary tributaries of the Chuitna, has been identifiedby the Alaska Department of Fish and Game as "important" to salmon. The headwaters of Middle Creek, which produces roughly 20% of the silver salmon for the entire Chuitna River system, would be removed if PacRim commences its coal strip mining operations.

Strip mining will completely remove the underlying soil and rock strata to depths of more than 350 feet, not only destroying wetlands and streams, but destroying the entire underlying geology and hydrologic functions that make salmon propagation possible. Additionally, the mine would dump over 7 million gallons of wastewater each day into the Chuitna, impacting forever the chemical, hydrologic and sediment regimes for all downstream reaches.

A thorough review of scientific and technical literature fails to support any notion of successful salmon stream restoration after the type of large scale destruction planned for the Chuitna, and there is no scientificevidence to suggest the region's pre-mining functions and values can be restored post-mining. Relevant supporting documents can be found on the Chuitna Citizens Coalition website, found here: http://chuitna.org/documents/.

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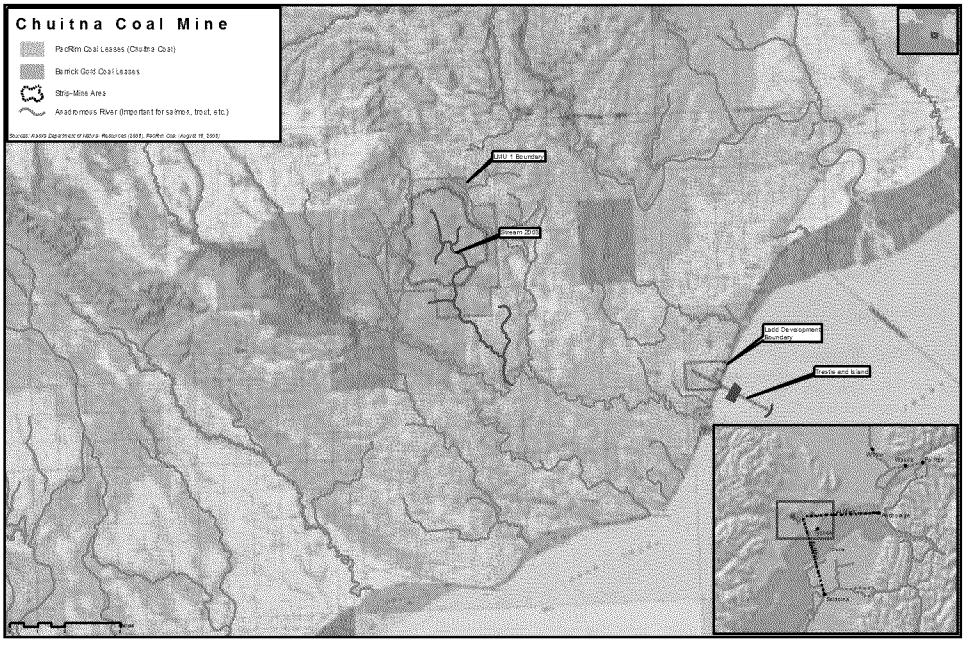
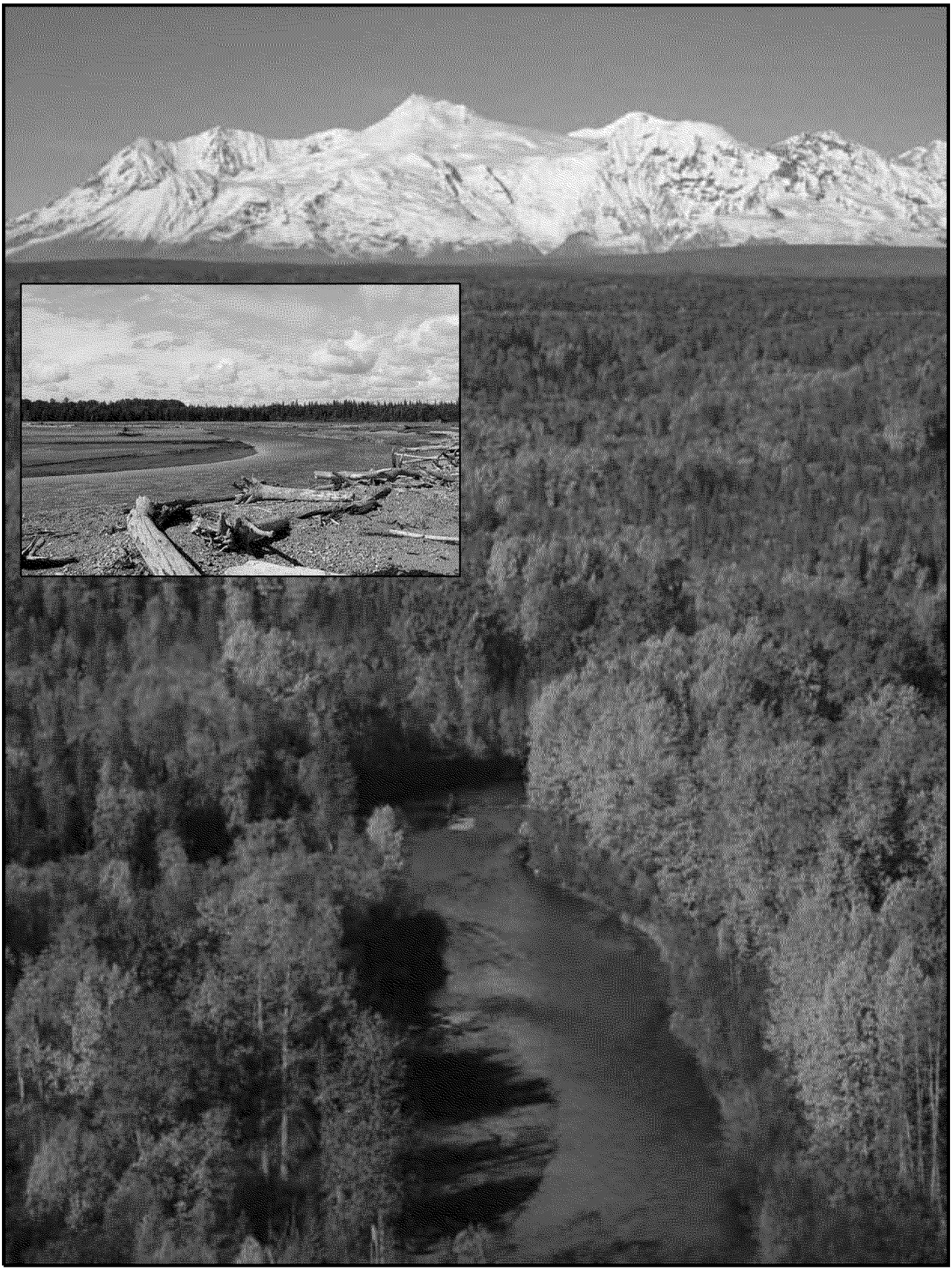


Looking up river on the Chuitna, toward the Alaska Range, in late September with fall colors. Photo: Damion Brook Kintz

Inset: The mouth of the Chuitna, where it meets Cook Inlet three miles north of the Native Village of Tyonek. Photo: Jeanne Devon



Protecting *Rivers* —New Guidance Available for Off-Highway Vehicle Trail Management

by Lisa Holzapfel

Protecting the planet's rivers has become an increasingly challenging task in the face of human development. The expansion of off-highway vehicle (OHV) use across the country has resulted in some significantriver management issues. Alaska hasn't escaped the national trend of state's watersheds and rivers being damaged by motorized vehicle use that disrupts natural drainage patterns and poses a threat of discharging sediment into pristine waters. The Alaska Region of the National Park Service has been addressing this challenge and has developed techniques to aid river and land managers.

A new publication on OHV trail management by the United States Department of Agriculture, Forest Service and United States Department of Interior, National Park Service (NPS) is now available. "A Comprehensive Framework for Off-Highway Vehicle Trail Management" written by Kevin Meyer, the NPS Alaska Regional Trails Specialist, describes a framework for river managers to apply to their own situations. Meyer, a trained soil scientist, has worked on one aspect or another of watershed protection during his 35 year career with the NPS in Alaska. "I've seen the rapid expansion of OHV issues throughout my career" states Meyer. "It has been one of the most pervasive and difficulttopics to address and only recently have resource management professionals gotten a handle on how to approach it". "The key," says Meyer, "is the application of sustainable trail design concepts."

Paving blocks installed in stream crossing.

In the course of his work Meyer has become a nationally recognized expert on sustainable trail design and its application. Much of his efforts have been in association with the NPS River, Trails, and Conservation Assistance Program (RTCA). Through RTCA, over 35 sites in Alaska have been the testing ground for sustainable OHV design concepts. The sites range from Barrow to Kodiak and Nome to Sitka. They include extensive work with Alaska State Parks in the Chena River State Recreation Area east of Fairbanks, and with the USDA Natural Resources Conservation Service in Hooper Bay. The Hooper Bay ATV Subsistence Trail Project won a Department of the Interior's National Cooperative Conservation Award in 2008. Porous pavement panel trail building techniques were used on the project to create a durable tread surface which helps to prevent erosion of sediments into important wetlands and helps protect critical migratory bird habitat. The Hooper Bay sustainably built OHV trail also helps to protect important subsistence resources for the Village of Hooper Bay.

Sustainable design for trails has only recently emerged as a professional concept. It developed from the scientificevaluation of trails built in the past and an increasing awareness of the impacts of mechanical trail use by mountain bikes and off-highway vehicles. Adapting from work done by California State Parks, a leading organization on sustainable trail design, and the International Mountain Bike Association (IMBA), a leading advocate for sustainable design education and construction, Meyer has refined sustainable design concepts for OHV trails. These concepts include building trails with a contour curvilinear alignment, controlling trail grade, integrating drainage into the trail design, building with a full bench on side slopes, providing a durable tread surface and ensuring there is appropriate maintenance throughout the life of the trail.

In addition to promoting basic design concepts, Meyer's publication provides information on trail management fundamentals and a 10-element framework that provides for a systematic, scientificapproach to trail man - agement. Although the publication focuses on OHV trails, it has wide applicability to other types of trails including foot, bike, or multi-use trails worldwide. Twelve appendixes provide extensive additional detail ranging from best management practices to examples of trail work. The 319-page publication is vividly illustrated with color figuresthat explain major trail sustainability concepts. Published as a cooperative effort by the National Park Service and the Forest Service's Missoula Technology and Development Center, the publication is a follow-up to Meyer's earlier publication on "Managing Degraded OHV Trails in Wet, Unstable, and Sensitive Environments."

Electronic versions of both of Mr. Meyer's publications are available at: http://www.fs.fed.us/eng/pubs along with numerous trail-related publications from the Forest Service. Limited free hard copies of the new publication are available. To request a copy, contact kevin_meyer@nps.gov. ◆

Lisa Holzapfel, Program Manager, works for the National Park Service, Alaska Region, Rivers Trails and Conservation Assistance Program.

Top L: OHV's crossing streams

Top R: Hooper Bay trail crew

Middle: Resource impacts on Kodiak Island

Bottom L: Author Kevin Meyer teaching OHV trail installation in Hooper Bay, Alaska

Bottom R: OHV trail in Hooper Bay wetland complex

All photos courtesy of the National Park Service, Alaska Region

Overlapping Jurisdictions:

Yukon court cases will decide state versus federal river management

by Doug Whittaker and Bo Shelby

Authors' note: This article's origins can be traced to a campfire discussion about state-federal management issues during the Northwest Chapter fieldtrip on the Rogue River in November 2011. It provides an example of how on-the-river collaboration among resource professionals can help resolve specificproblems (on several Oregon rivers) and encourage exchanges of ideas on a more general level (a listserve discussion, this article, and a follow-up article to come as described in the endnote).

The Yukon River isn't the firstplace one would expect to finda river management controversy. Although it has a rich gold rush "boom and bust" history, the 158-mile reach between Eagle (population 160) and Circle (population 100) now has only a few public use cabins, seasonal camps, and abandoned homesteads; river use levels seldom exceed a couple hundred trips per year, mostly long distance canoers or hunters in river boats. For this river with summer flowsover 150,000 cfs in a channel that is sometimes a mile wide, the dominant adjectives are "big," "wild," and "empty." Shelby traveled here for a Park Service navigability project in the 1990s, noting the Yukon feels a lot like the Lower Mississippi, but without commercial-grade ship/barge trafficand hundreds of years of shore development that includes cities, towns, bridges, industries, levees, and channelization.

About 128 miles of the river flowwithin Yukon-Charley Rivers National Preserve, a 2.5 million acre unit of the National Park Service. Three decades after designation through the complex political process that led to the Alaska National Interest Lands Conservation Act (ANILCA), some Alaskans still bristle at federal management. Because the Yukon is legally navigable (Shelby, Whittaker, and Donohue 2011), the State of Alaska owns the water, bed, and banks, to be managed for the public trust. In two on-going court cases and a subsequent Congressional response, Alaskans are learning (or will learn) how and when one overlapping jurisdiction "trumps" the other. In this article we summarize the cases, discuss some implications, and foreshadow a follow-up article (for a future RMS Journal edition) about other ways agencies have handled ongoing state – federal relationships on rivers.

Case 1: Not your routine public contact

Information about this incident came from multiple sources, including the judge's ruling and extensive reporting (primarily from Tim Mowry at the Fairbanks Daily News-Miner, see references).

NPS law enforcement rangers in Yukon-Charley Preserve conduct 60 to 100 public contacts during each year's open-water season. These contacts usually focus on boating safety and visitors' trip plans, but rangers also check boat registrations or make sure hunters and anglers have their licenses and know the regulations. During a typical on-river contact, a pair of rangers in a patrol boat may ask a boat to stop, idle side-by-side on the wide river, or "raft-up" to facilitate conversation or allow boarding if necessary. Checks usually last a few minutes.

In mid-September 2010, rangers flaggeddown a 21-foot powerboat occupied by Jim Wilde, his wife, and a friend, on their way to a hunting camp. According to the judge's ruling on the facts (Oravec, 2011), Wilde recognized the request to stop by slowing down, then realized the rangers were Park Service and changed his mind, unleashing some colorful language and accelerating up the river. The rangers – one in his firstseason on the river, the other in his second – gave chase and easily caught and then kept pace with the heavier-loaded boat, following a parallel path at about 20 miles per hour. For about 30 seconds, ranger shouts to stop prompted additional colorful language until one ranger pointed his pistol and then a shotgun at Wilde's craft.

It took Wilde less than a minute to slow then pull into shore. He jumped on land, threw an anchor into the muddy bank to secure his boat, then started upstream to where the NPS rangers were beaching theirs. Wilde approached the rangers with fists balled up and cursing, despite repeated instructions to "stop" and "get to the ground." The rangers tackled Wilde and then threatened to use a Taser, which finallycalmed Wilde enough to be handcuffed. They moved Wilde (along with his boat and passengers) to a nearby public use cabin for the night, later transporting him to Circle and eventually Fairbanks where he spent three additional nights in jail. Wilde was charged and later convicted in a non-jury trial in federal court for "operating an unregistered boat," "violating a lawful order," and "willfully interfering with rangers' attempt to perform their officialduties," with a total fine of $2,500. He was acquitted on "disorderly conduct." If it is fair to suggest a soundtrack for the firsthalf of the story, it might be the 60's classic cover, "I fought the law (and the law won)." But there's more. It's worth noting that Wilde was 70 at the time of the boat check, while the rangers were in their 20s. In addition,

the same rangers had conducted a boat check the previous month and detained a local subsistence user for several hours for having an unregistered boat and refusing to provide identification.Many Alaskans have a libertarian streak and saw this as a pattern of overreach; the Wilde incident quickly became a "cause célèbre" that culminated in a "FedUp with the Fed" rally in Fairbanks to raise legal funds. The event was attended by Don Young (Alaska's only congressman, who had called the arrest an "egregious abuse of power") and Lisa Murkowski (a two-term senator in the middle of a tough re-election campaign, who said that NPS had "overreacted"). Governor Parnell was represented by the Director of Wildlife Conservation of the Department of Fish and Game. The State of Alaska eventually fileda "friend of the court" brief on behalf of Wilde, while also asking Interior to curtail all federal regulations that allow federal agency enforcement on navigable waterways.

Recognizing a public relations problem, NPS organized a public meeting the following June in Eagle to address enforcement protocols and improve communication with the public. The agency agreed to reassign the involved rangers to other parks, cease on-river public contacts in favor of less onerous shore contacts, and form an informal working group with local residents to address regulation issues. Based on newspaper reports, Eagle residents were cautiously hopeful that park intentions and actions would improve (Mowry, 2011).

Young and Murkowski, however, wanted stronger constraints on federal power. They attached a rider to a recently passed Department of the Interior appropriations bill (Jan 2012) that prevents NPS from conducting any boat inspections on navigable rivers in the Yukon-Charley Preserve. Murkowski's statement about the bill notes, "Park Service rangers are not the Coast Guard. While this does not resolve the underlying jurisdictional dispute between the state and federal governments over who has authority over navigable waters within Alaska's federal park units, it does eliminate the possibility of future confrontations between boaters and rangers."

Wilde has appealed his convictions on grounds that NPS lacks authority to enforce state regulations on state waterways, even if they run through a national conservation unit. Several previous court cases appear to argue differently (see summary list below), but time will tell whether Wilde's appeal will change our understanding of the law.

The drama of the Wilde case gave it considerable notoriety, but the outcome was not unexpected for many observers. Wilde's initial violation was a lack of boat registration, a law the state supports even if it objects to the way the law was enforced. In addition, federal officersare allowed to enforce state laws, espe - cially if those affect Preserve uses and purposes such as public safety. The more challenging question is whether federal regulations developed ***solely*** for a conservation unit can be enforced on waters owned by the state (per navigability law) before ANILCA was passed in 1980 – something Wilde's case didn't raise. ANILCA also contained several limitations on federal authority as part of the "grand compromise" that balanced environmental interests with state access and development objectives.

Case 2: What about a federal hovercraft ban?

Enter John Sturgeon and his hovercraft. Sturgeon is an Anchorage resident who has hunted on the Yukon and Nation rivers in the Yukon-Charley Preserve since the 1970s, using a personal hovercraft since 1990. In 2007 Sturgeon was beached on a state-owned gravel bar on the Nation to repair broken steering, and three rangers stopped to explain the Preserve's hovercraft ban, in place since 1996. Sturgeon was not cited, but was told to leave after he repaired his boat. He did not return to the Preserve in that craft, but continued to wonder if the park had authority to enforce the ban. In 2011 he filedsuit to findout.

The State of Alaska (2011) has joined the suit, noting that its interests are not precisely parallel with Sturgeon's, but state sovereignty and public trust responsibilities are at risk if ANILCA-based regulations supersede access rights on state waters. The unstated presumption appears to be that federal regulations require state concurrence, and the state might not agree to a hovercraft ban without evidence of an impact problem (for more discussion on impacts from non-traditional craft like hovercraft, see

Use levels are low on the Yukon and its tributaries through the Preserve, but court rulings could affect Park Service regulations or law enforcement activities, and possibly set precedents for management of other rivers in Alaska or nation-wide.

Whittaker, 2008). The state brief lists other objections to several federal regulations that have been invoked to constrain state or private uses of state lands through federal conservation units.

Examples include federal requests for:

- State biologists to get a federal permit to collect genetic fish samples on the navigable Alagnak Wild River in Katmai National Park and Preserve.
- A kayaking guide to get federal authorization to paddle on Bear Glacier Lake, accessed from salt water in Kenai Fjords National Park.
- Fishing guides to get permits to operate on the Naknek River in Katmai National Park.

Although legal strategies on either side remain to be seen, several often-cited court rulings may be relevant. Most appear to affirm federal authority on adjacent lands if a regulation affects a conservation unit's purpose, but at least one affirmsstate interests in federal management plans and associated regulations.

- Kleppe v. New Mexico (U.S. Supreme Court, 1976). Federal regulations regarding free-roaming horses and burros were found constitutional, and superceded state laws on federal land based on the Constitution's Property Clause (Article IV, Section 3). This allows federal authorities to regulate uses that protect wildlife and visitors on federal public lands, regardless of state law.
- U.S. v. Brown (8th Cir. 1977). The National Park Service can regulate tour operators and enforce hunting laws in Voyageurs National Park, even on state-owned lakes, because the conservation unit was created with the "state's consent or cession," and these activities could "significantlyinterfere with the use of the park and the purpose for which it was established."
- U.S. v. Lindsey (9th Cir. 1979). The Forest Service can regulate firesand camping on state-owned gravel bars below ordinary high water adjacent to federal land in Hells Canyon National Recreation Area.
- Minnesota v. Block (8th Cir. 1981). The Forest Service in Boundary Waters Canoe Area Wilderness can regulate motorized snowmobile and powerboat access even on state navigable waters. The court affirmedthat the state owned and had jurisdiction over navigable waters, but couldn't adopt less restrictive laws than federal regulations if those interfered with federal conservation purposes (an expansion of the Constitution's Property Clause identifiedin Kleppe).
- U.S. v. Arbo (9th Cir. 1982). The Forest Service had authority to contact a California snowmobiler, even on adjacent private land, to warn about a closed area in a National Forest, as long as the stop was "reasonably necessary to protect adjacent federal property."
- Sierra Club v. Robertson (8th Cir.1992). A state's interests in fish,wildlife, recreation opportunities, and water quality are sufficientto allow the state to be a plaintiff-intervener in challenging a Forest Service management plan.
- Katie John et al., v. Babbitt and State of Alaska (9th Cir., 1995, 1999, 2001). The federal government has the authority to protect the rural subsistence priority specifiedin ANILCA, which has led to federal (rather than state) subsistence management on all federal public lands and waters since 1999 (including navigable streams with a federal reserve water right, or those adjacent to conservation units).

Implications for river management

Without commenting on the particular facts, issues, or law in these two cases (or the list of potentially relevant appellate and Supreme Court cases), we have a few thoughts about overlapping jurisdictions and river management that may be addressed (or exacerbated) in eventual rulings.

- Jurisdictional boundaries are often "artificial"with respect to the way resource areas are actually used, and people and wildlife in river corridors are likely to cross and re-cross them. It may be unrealistic to expect that these boundaries create "clean" distinctions the public can recognize and agencies can readily manage.
- The public are often confused over who manages what, and many (including the authors' wives and many of their friends) don't even distinguish between federal and state governments, let alone among different federal land-managing agencies. One can only imagine their confusion over inconsistent state or federal regulations.
- Inconsistent regulations or confusion about authority may lead to violations or even confrontations. Incidents like the one in the Wilde case are the exception rather than the rule, and it seems fair to say that poor choices on both sides caused the situation to escalate. But confrontations produce hard feelings all around and are potentially dangerous.
- State and federal "missions" on most rivers are similar, and there are possibilities for joint decision-making to reduce confusion among the public and manage resources effectively. There is often work involved in reconciling federal and state objectives, but the dividends of cooperative management are likely to be high.
- There may be efficiencies in partnerships between state and federal agencies if they can capitalize on each agency's strengths. For example, state and federal agencies in Alaska have cooperated on many river projects over the years, sharing information, staff, buildings, and expertise while addressing common problems. The Kenai River Center, which houses state, federal, and local government staff, is a notable example, as is the Kenai River State Management Area (KRSMA) board, which convenes stakeholders and government staff at all levels to provide a forum for cross-agency discussion and initiatives.
- In spite of such successes, the climate for cooperation in Alaska appears to have changed. In the past federal agencies invited (and received) active participation from state staff during several Wild and Scenic River planning efforts. But in recent years the state-federal gulf seems to have widened and communication seems more formal. These lawsuits probably won't help, but hopefully the pendulum will swing back in time.
- When interest groups identify a "better deal" from one agency, they may choose the venue that enables them to prevail (legal minds sometimes call this "forum shopping"). Mr. Sturgeon is pursuing a ruling because the State of Alaska is more pro-access than the protection-oriented Park Service, a philosophical difference unlikely to disappear anytime soon.
- In other states (or other parts of Alaska) the philosophical or political differences between resource agencies are sometimes less stark, but even here they may shift with elections or appointments. Astute resource managers establish personal relationships with other-agency colleagues and take advantage of periods when agencies are on the same page.
- River Management Society offers great venues for state and

federal staff to form relationships and transcend the posturing and formality that accompany inevitable jurisdictional disputes. Philosophical and political tensions have been around since RMS was founded and "grew up" in the 70s and 80s, but they haven't precluded river managers from findingways to work together and get things done.◆

Authors' end note: In a follow-up article we will develop examples of ways that state and federal agencies are working together to sort out their philosophies and responsibilities and solve common problems. Most were submitted in response to a listserve request (prompted by the campfirediscussion described in the opening note). We have stories from most of the western states where there is more federal land, but we also have a few from the East and Midwest. If you have additional examples, please contact Doug Whittaker at dougwhit@alaska.net with the details.

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(continued next page)

National Wild and Scenic Rivers – State/Federal Cooperation is Standard in New Jersey

by Paul Kenney

When the state of New Jersey reviews waterfront development applications on its rivers that empty into the Atlantic Ocean under its Coastal Area Facilities Review Act (CAFRA), it applies a stricter standard of protection for the Maurice and Great Egg Harbor National Scenic and Recreational Rivers. CAFRA is how the state administers the Federal Coastal Zone Management Act (CZMA).

Under New Jersey Administrative Code 7:7E-3.46, the state regulates the length of docks, the design of bridges and culverts, how streambanks should be stabilized, and the placement of cell towers along the Maurice and Great Egg. It is the only state that has a separate body of state regulations designed to specificallyprotect federally designated National Wild and Scenic Rivers.

How this was made possible was fairly straightforward. During a scheduled CAFRA rulemaking process in 2003, the National Park Service (NPS) submitted detailed draft regulations designed to protect both rivers. The New Jersey DEP accepted the NPS draft regulations, and after subsequent negotiations, and after addressing public concerns during the comment period, nearly all of the river-protection measures NPS asked for were adopted. It's important to note that for years prior to the rulemaking process, NPS had developed a constructive relationship with NJDEP staff. This likely helped move along the NPS draft regulations during the state's rulemaking process.

The implications of what happened in New Jersey are important: Folks who want to protect National Wild and Scenic River resources can propose draft protection regulations during a state's rulemaking process, even if they are federal employees and the draft regulations are to protect National Wild and Scenic River resources.◆

For more information, please contact:
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*(**75 Years**, from page 6)*

developments, including hydropower, and coordinate with all involved to avoid and mitigate impacts to fisheries.

To experience Alaska's bountiful rivers, it is essential to have facilities and improvements supporting access. The state has developed 14 boat ramps, 10 trail systems, and 19 land acquisitions that provide access to rivers.

ADF&G delivers a variety of outreach products to the public as well. Just last year, more than 20 events were hosted, reaching well over 20,000 attendees at fairs, community gatherings and sportsmen's shows. Over 15,000 students in more than 144 schools participated in aquatic education programs. Activities in these adult and student programs include lessons in aquatic biology and participation in fishingclinics, including events that introduce young people to the pleasures of winter ice fishing.These activities not only help Alaskans enjoy their fishand wildlife heritage, they are also critical to ensuring that future generations will continue to value healthy rivers and fishpopulations.

If you enjoy fishand wildlife in Alaska, you can thank hunters, anglers, and boaters for their contributions; and if you've ever purchased firearms,ammunition, arrows, fishinglures, rods and reels, hunting or fishinglicenses, or fueled up your boat, then you are part of this highly successful conservation program. Moreover, all Alaskans benefitfrom the WSFR program. You don't have to be an angler, hunter or boater to appreciate watching salmon leap in the rivers, or hearing the distinctive call of sandhill cranes overhead during their migration flights.We're all in this together. It's your nature. Go out and enjoy it.◆

For more information, go to http://wsfr75.com/.

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*(**Mining**, from page 8)*

Federal and state laws require coal companies to restore the land after operations cease. While it is relatively easy to reproduce surface contours and re-vegetate, it is virtually impossible to return the groundwater and surface streams to their previous condition. Nowhere in Alaska has an industry proposed to so thoroughly impact a watershed and the associated underlying geology—and nowhere in the world is there an example of such destruction being returned to its former productivity.

If coal strip mining proceeds in the Chuitna watershed, the damage to streams and wetlands will be permanent. Perhaps more importantly, if the state sacrificessalmon habitat for minerals in Cook Inlet, it will set a statewide policy favoring finiteresource development over sustainable resource management.

The prospects of this horrendous precedent are driving local grassroots efforts to protect the Chuitna from coal strip mining. The Native Village of Tyonek – the closest village to the proposed project - opposes coal strip mining in the watershed, as do dozens of other Native, commercial fishing,property rights and conservation groups.

In his acclaimed book "King of Fish: the Thousand Year Run of Salmon," Professor David Montgomery recounts the demise of once-proud salmon fisheriesacross the globe. As the Chuitna coal strip mine moves into the permitting phase in late 2012, all eyes should be on the dangerous precedent posed by mining through a wild, Alaska salmon stream. We've already lost the once-great PacificNorthwest and Atlantic wild salmon runs—in the Last Frontier, we have one more chance to get it right.◆

EPA casts a scientific spotlight on Bristol Bay and *potential* mining development

by Hanady Kader
EPA Public Affairs Specialist

For a year now, the U.S. Environmental Protection Agency has been working to answer the question: What makes Bristol Bay tick?

The Bristol Bay watershed in Southwest Alaska is the habitat of one of the largest salmon populations in the world. In February 2011, EPA announced a scientificassessment encompassing the rivers, lakes and wetlands of two Bristol Bay watersheds—the Nushagak and Kvichak—to understand how large-scale development would affect water quality and habitat.

The agency launched this study in response to concerns from federally recognized tribes and others who petitioned the agency with concerns about how large-scale mining development might harm the watershed.

The EPA assessment aims to answer three key questions:

- Is the Bristol Bay salmon fisherya one of a kind, world class fishery?
- What are the potential impacts to Bristol Bay's salmon fisheryfrom large-scale development activities?
- Are there technologies or practices that will mitigate these impacts?

Our EPA Bristol Bay team includes scientists with expertise in fisheries, biology, mining, geochemisty, and anthropology. EPA scientists and policy-makers visited the watershed, listened to communities on all sides of the issue, and learned from Alaska Native villagers that depend on salmon for their traditional subsistence lifestyle and income.

A year into our assessment, we have made significantprogress characterizing the salmon and other fisheries,wildlife, roads, economics, and culture of the Kvichak and Nushagak river drainages. We have also developed a plausible mining scenario we will use for the assessment.

Looking ahead in 2012, we are preparing to release a draft of the assessment for public comment and scientificpeer review. We are also preparing for public meetings where we can listen and learn.

The Koktuli River (pictured above) is a headwaters tributary of Bristol Bay's Nushagak River. Copper, gold and molybdenum deposits have been located deep within the distant hills, raising concerns about potential risks to the fisheriesand local economies if mining is permitted. Photo: EPA

As we continue on our path to understanding what makes Bristol Bay tick, we want to hear from the public and scientists. The more we know, the more prepared we can all be to do what's best to protect the Bristol Bay watershed.

For more information about the EPA Bristol Bay Watershed Assessment, visit http://yosemite.epa.gov/R10/ecocomm.nsf/bristol+bay/bristolbay ◆

On average, Bristol Bay's Kvichak River produces about 12 million sockeye (red) salmon each year - more sockeye than any other river in the world. The Bristol Bay watershed produces an average 31 million sockeye salmon annually, nearly half of the world's total. Photo: Thomas Quinn, University of Washington

The Bristol Bay Lesson

"On my favorite Alaskan adventure, I caught few fishand learned to love gillnetters."

Academy student, Fernando, and the author discuss the fineart of flyfishing.

by Kirk Deeter

It started when I found myself standing alone in a pelting rain on a gravel airstrip in the Yu'pik village of Ekwok. I'd just taken a mail-run flight from Anchorage to the Bristol Bay, seated next to bulk boxes of rice and paper towels. I was already wondering how I'd get home when an old pickup truck pulled up moving no faster than a riding mower. Out popped Tim Troll of The Nature Conservancy, and soon after, 73-year-old Luki Akelkok. It was a high honor, being welcomed by the village chief. They drove me to Luki's home and fed me a sandwich of chopped "three-day smoke" salmon.

I'd made the trip to take part in the Bristol Bay Fly Fishing and Guide Academy, a cooperative project of The Nature Conservancy, the Bristol Bay Native Corporation, Trout Unlimited, and the Bureau of Land Management. I was assigned the role of junior guide under head instructor Dan Plummer.

The mission of the academy is to find teenagers and young adults from villages around the Bristol Bay region—places like Togiak, Naknek, New Stuyahok, and elsewhere—and teach them the basics of fly fishingand guiding.

For years, commercial fishermen, natives, and more recently, sport fishers have been at odds in this part of Alaska. Many natives have long wondered why wealthy catch and release anglers from the Lower 48 would want to go all that way to fishthose rivers and "play with their food."

But the common threat of a proposed mine is creating strange bedfellows—anglers and gillnetters—to fightthe project. The Pebble Mine plan calls for massive tailings ponds contained by earthen dams—in one of the most seismically active regions in the world. The potential environmental contamination could devastate the salmon fishery,an issue eloquently documented in the filmRed Gold by Felt Soul Media.

I spent a week with the native population, sleeping in a bunkhouse lodge, sharing meals, and running around in search of silver salmon. The lessons went both ways. It was immediately clear though that nobody had to teach the students how to findfish:they have a deep, physical and spiritual connection to the water and land.

The catch and release topic was more nuanced. I was struck by a poignant conversation I had with Reuben, a student-turned instructor, on the topic. "When we moose hunt," he said for an example, "We believe the animal presents itself to us as part of a plan. That is the same for the fishwe catch. To not make full use of the animal that has given itself to you is disrespectful."

I thought of the "whack it, take photos, and hang it on the wall" mentality that's glorifiedon Saturday morning cable television, and couldn't come up with a response.

"But I guess, if a salmon or trout presents itself to you, and you respect it, and release it in a way that has benefitto the people and the fishas a whole, that would be good also," he added.

I felt better. Later in the week, I watched as another student, Fernando, landed a few fish,then simply stopped fishingto crouch on a rock and admire the silver finsas they dipped and slashed in the rifflein front of him. "I like to catch them, but I like to watch them too," he shouted to me. Whether he becomes a guide or not, I don't know many others who "get it" like that kid did on that day.◆

Kirk Deeter (3rd from R) and participants of the 2010 Bristol Bay Fly Fishing and Guide Academy. Photos: Clark James Mishler

Kirk Deeter is an editor-at-large at Field & Stream and appears in The Kodiak Project, from LDR Media, featured in the 2012 Fly Fishing Film Tour.

This article is reprinted courtesy of StoneflyMagazine.

NOTE:

The 2012 Bristol Bay Fly Fishing and Guide Academy will be held in May at the village of Igiugig on Alaska's Kvichak River. The academy thrives on contributions of time, equipment and funding. Contact Nelli Williams, the Special Projects Coordinator for the Alaska Program of Trout Unlimited at NWilliams@tu.org if you would like to help.

http://bbflyfishingacademy.org/

Trip Report: *Kongakut* River

by Mary Price

The year 2011 marked the 50th anniversary of the Arctic National Wildlife Refuge, tucked in the far northeast corner of Alaska. Luck favored me with an opportunity to experience this remote yet famous land when invited to join a non-guided group on a trip down the Kongakut River, located in the refuge's designated wilderness. From headwaters in the Brooks Range, the Kongakut flows east and then north through the mountains, across the coastal plain, and into the Beaufort Sea. At average flowrates, its waters are mostly class I and II, with stretches of class III. Clear water, abundant wildlife, magnificentscen - ery, fishingopportunity, and reasonable access (for bush planes) combine to make the Kongakut a popular floattrip. Still, the river is not crowded. It is remote. To put it in perspective, if you were on land at the same latitude in the southern hemisphere, you would be standing on Antarctica.

Bill Rice looks down river during a hike. Photo: Mary Price

Getting to the river requires chartering bush planes with the ability to land on bumpy river gravel bars. The flightover the Brooks Mountain is part of the adventure. During the multi-hour flight,we crossed a seemingly endless expanse of mountains without spotting a single sign of human development. Two planes shuttled our group of eight to the put-in near Drain Creek on June 23. We arrived hours before a heavy thunder storm hit the area. In the morning the river was a few feet higher from the rain.

We designed our trip around alternating days of hiking and river travel. The hikes were all cross-country as there are no trails besides sections of game trails. The wide-open country appeared easy for hiking, but steep mountain slopes, frequently boggy ground, and large fieldsof wiggly hummocks made for some challenging walking. Still, we could pick any mountain in sight and finda reasonable path to the peak. We were rewarded on our hikes both by grand mountain vistas and a colorful carpet of blooms underfoot. Stopping to admire the miniature plants also allowed me to catch my breath during steep ascents.

After the bump in flowsfrom our firstnight's storm, the river quickly dropped, and overall we experienced below average flows.In the steeper canyons, normally free-flowingrapids were transformed into rock gardens which strained water through passages narrower than the rafts. Where the mountains spread miles apart, the river braided into numerous tiny shallow channels that might split into yet smaller channels too small to float.There was always at least one right choice...along with several wrong ones. We only had to walk and drag the boats a few short sections.

A more unusual obstacle was aufeis (a thick layer of ice left over from winter). The potential danger was encountering channel-spanning ice that could funnel rafts into ice tunnels. We floated through a couple sections where vertical ice walls lined the banks, but there was a clear channel through.

Whether we were hiking, floating,or lounging in camp, wildlife viewing offered its delights. We saw Dall sheep, caribou, and brown bears; all accompanied by their adorable young ones. Two members of our group got a good look at a wolverine as it passed by camp. We did not spot wolves, but we saw their fresh tracks and heard their howls. Of winged wildlife, there were dozens of bird species to look for. The other winged wildlife, mosquitoes, were not hard to findand not a delight. At times they were pretty annoying, but we all came armed with several methods of defense against them, so we kept our sanity for the most part.

We were in the arctic summer, which meant 24 hours of daylight. Still, visitors to this land must come prepared for any type of weather. We experienced four seasons of weather during our 13 days there. After our firstnight and day of heavy rain and thunder, we enjoyed several days of clear blue skies and temperatures reaching into the 80's. A couple of days later, we were wearing every layer we had as we battled to paddle downstream against fiercenorth winds that brought bitter cold and hurled horizontal sleet in our faces. For two days, the cold wind was punishing enough to drive us off the exposed river and seek a sheltered camp where we found a bit of wind protection – tricky in country where 90 percent of the vegetation is less than 3 feet tall. Following the second day, we awoke to a snow-covered landscape. The weather turned mild for the finaldays. We had

(continued on page 34)

RMS Northwest Chapter Float – Rogue River

by Patrick Kollodge

Cool, crisp late fall weather greeted fifteenRMS members and friends who gathered last November at Rand, Oregon, for a three-day floaton the Rogue River. This was a departure from the usual self-supported camping excursions the RMS is known for. Instead of pitching tents and cooking outdoors we stayed in employee housing at Rand the night before we launched, the Black Bar Lodge the second night and Paradise Lodge the third night. We were the finallodge guests of the season. Instead of bonding over meal preparation, camp set-up and take-down, shared misery packing cold wet tents and discussing the proper placement of the river toilet, we were forced to tough it out in warm, dry river lodges eating hearty meals and having long conversations in front of a crackling river-rock fireplace.

Of course, the river floatitself gave us an opportunity to switch boats and get to know each other throughout the 43.3 mile journey. Our group ran the spectrum from newly-minted river managers to seasoned professionals who literally wrote the

Standing L to R: Curt Booher, Bill Blackwell, David Payne, Will Sayne, Tom Hawkins, Nancy Schwieger, Alan Vandiver, Bonnie Wood, Bo Shelby, Rick Thompson. Front L to R: Becky Brown, Lisa Byers, Todd Neville, Trish Lindeman, Lisa Klinger, Amy Bannon, Tinelle Bustam, Patrick Kollodge

Deschutes	Rogue
$8 per person per day weekends $2 per person per day weekdays	$10 per person per trip (1-7 days)
No refund policy	No refund policy
Visitor Center open 4 days a week	Visitor Center open 7 days a week
Group has to be within one-quarter mile of each other	Allows group to split into 2 groups, must be together at night in camp (or lodge)
Commercial Permits (SRPs) bring in about $140,000 a year	Commercial Permits (SRPs) bring in about $235,000 a year
Noncommercial Permits (Boater Passes) bring in about $250,000 a year	Noncommercial Permits (RUPs) bring in about $110,000 a year
River Patrols are Fridays through Mondays (don't patrol Tuesdays through Thursdays)	River Patrols Sundays through Saturdays (vary our launches to check different outfitters,in summer they launch on specific days of the week)
Boater Passes on-line	Permits issued in-person at Rand Visitor Center on launch date
Managed jointly by BLM and Oregon State Parks	Managed jointly by BLM and FS

books that guide current river management decisions.

Topics discussed after dinner at the Black Bar Lodge included:

- operational differences between the Klamath, Rogue, John Day and Deschutes
- bridging the gap between management and river rangers
- creating a new "Center of Excellence" for northern California and Southern Oregon river stakeholders; and,
- pooling resources for training and certifications.

We held our Chapter meeting after dinner at Paradise Lodge. RMS members talked about the organization, shared RMS experiences and encouraged everyone to get involved. We talked about volunteering, from putting a trip together to running for chapter office and what that entailed. We discussed various RMS activities such as: River Ranger Rendezvous, Confluences, listserve (email system of RMS members sharing information throughout the year), symposia and floatingdifferent rivers. The main topic of the evening was comparing the Rogue and Deschutes rivers *(see table on previous page)*.

The finalday included a stop at the remote Brushy Bar Guard Station where we discussed firepresence in the canyon, maintenance challenges in remote areas, waste management issues, bear structures, and volunteers in remote sites.

Participants volunteered to follow up on projects that we identified,such as:

- identifying training guidance and available resources for river staff
- opening a dialogue with the State of Oregon regarding jurisdiction below the line of ordinal high water on navigable waterways.

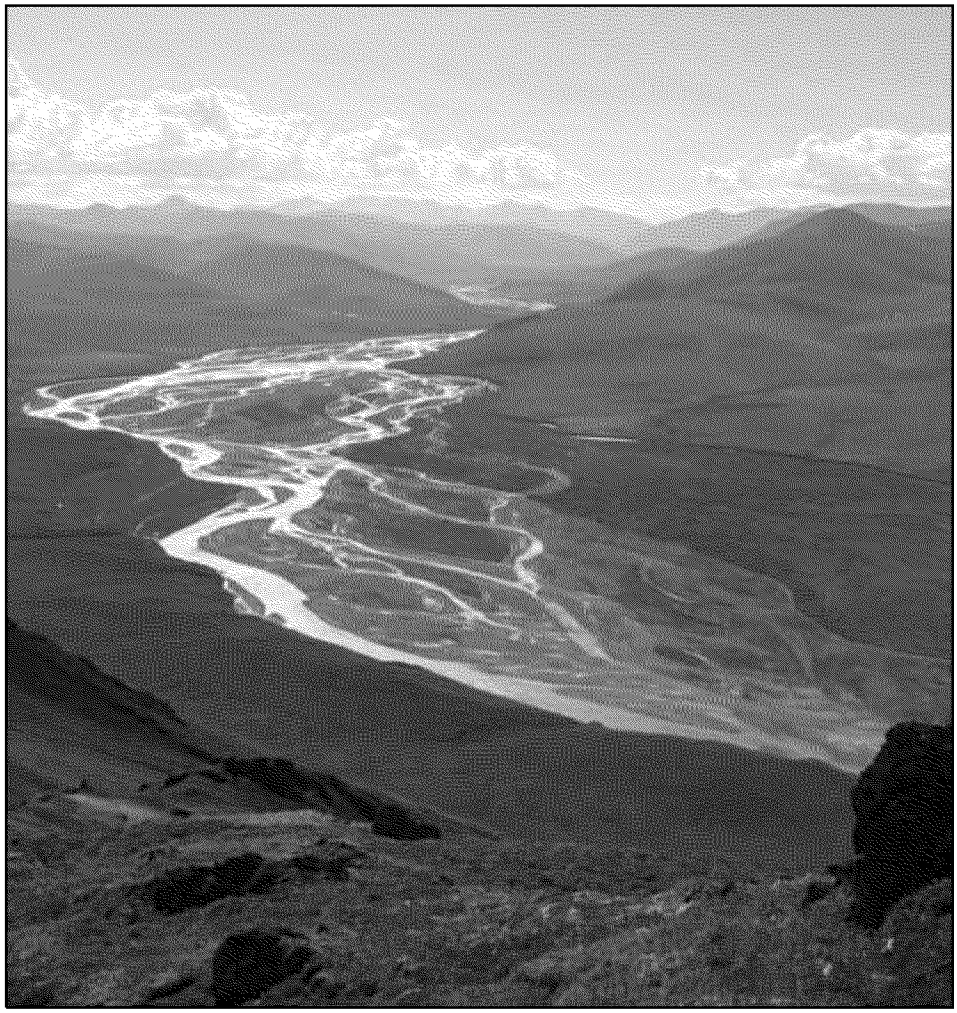
We said our goodbyes at Foster Bar, shared our contact information and made tentative plans to have the next Northwest Chapter RMS floaton the Deschutes or John Day River.◆

Arctic National Wildlife Refuge — Comprehensive Conservation Plan

by Jen Reed

If you compare the process of revising the Arctic National Wildlife Refuge's management plan to floatinga river, then you could say Refuge staff are near the take-out and still have their paddles. The plan, called the Comprehensive Conservation Plan (CCP), outlines and guides the long term management goals for the Refuge and its rivers. Currently there are three designated Wild Rivers on Arctic Refuge – the Sheenjek, Wind and Ivishak – and the CCP identifiesfour additional rivers that could potentially be recommended for inclusion in the National Wild and Scenic Rivers System. With public comments in, Refuge staff are revising the draft CCP into the finaldocument. It will be released to the public later this summer. Visit the CCP web page at http://arctic.fws.gov/ccp.htm to read about the Wild & Scenic River Review and other planning updates and to view CCP-related materials.◆

One of four Arctic Refuge rivers that could potentially be recommended for inclusion in the National Wild and Scenic Rivers System. Photo: USFWS



(*Hulahula, from page 1)*

a glaciologist, a terrestrial ecologist, an aquatic ecologist, and a guide, was about to experience how climate change and the subsequent loss of glaciers might affect visitor experience on one of the Refuge's most popular recreational rivers.

When we finallylanded at an airstrip near the Hulahula headwaters there was a strong north wind blowing off the ice pack of the Arctic Ocean and funneling up the valley. Much later that evening the wind subsided, but it picked up again early the next morning. Betting on that pattern holding, we decided to begin collecting samples and launch after dinner rather than spend most of our energy fightinga headwind.

The midnight sun illuminates the Hulahula River Valley and Brooks Range. Note the low water level and erosion along the near shore. Photo: Dave Payer, U.S. Fish and Wildlife Service

In the meantime, we had time to explore the river and surrounding floodplain. We watched Dall's sheep feeding on a hillside and golden eagles soaring overhead. Curious to check out the invertebrate community, we began picking up rocks from the riverbed. There was one stonefly on the firstrock and another on the second. The stoneflywas a nemourid and may have been the same species collected the last time someone sampled invertebrates on this river, nearly three decades ago. Loss of glaciers may lead to changes in lotic invertebrate community composition, declines in biodiversity, and extirpation of some species, so it's not clear if that stonefly specieswill still be around in another 30 years.

At 11 pm, the wind subsided a bit and we launched the boats. We went less than 50 meters before we had to jump out and start dragging. Our load was unusually heavy -- in addition to personal gear and food, we had a couple hundred pounds of scientificequipment and supplies, including flowand water quality meters, nets, a pump, pipettes, preservatives, vials, bottles, labels, notebooks, cables, and winches. This load may sound excessive, but it included only the bare minimum necessary to accomplish our goals, given the varied circumstances we might encounter. Our next campsite was just 6 miles from our put-in – surely we could make it that far even in low water.

As we dragged the boats and equipment downriver, we noticed a turbid tributary and then large piles of shrubby debris on an unvegetated gravel bar. This shrubby debris was likely deposited during a mass-wasting event that occurred somewhere upstream along the tributary. Warmer temperatures and thawing permafrost have increased the rate at which these events occur. In some non-glacial arctic rivers, increases in riparian shrub cover, possibly associated with the reestablishment of debris-flowshrubs on gravel bars, has been observed. On glacial rivers such as the Hulahula, however, reestablishment of debris-flowshrubs on river bars is likely limited by regular meltwater floodingwhich, for now, may be increasing as these glaciers melt at an accelerated rate (Nolan et al. 2011). When the glaciers disappear completely and regular flooding from meltwater ceases, the rate of shrub establishment may increase. Changes in riparian vegetation will undoubtedly influence channel morphometry and stability, transport of nutrients to downstream ecosystems, invertebrate community composition, and fishand wildlife populations using the river, the surrounding floodplain, and downstream estuaries.

When we finallymade it to camp near the next commonly used access point it was 6 am -- it had taken us 7 grueling hours to go 6 miles! We slept until the afternoon, awaking to fresh snow on the ground and Dall's sheep on the hillsides above camp. These sheep are an important subsistence food for Alaska Natives and are also valued by visiting hunters and other recreationists.

That afternoon a guided group that was just beginning their refuge visit flewin to the airstrip near our camp. More than 100 people visit the Hulahula River each summer for guided or private floattrips, some of which also involve hunting and hiking. The group we encountered intended to floatthe Hulahula and climb a nearby peak. Unfortunately, there were miles of shallow, rocky river between them and their mountain. Loaded down with heavy gear, they would most certainly be dragging their boats downstream as we just had. Later, we heard that due to unusually low water levels throughout the Brooks Range, this group had called it quits and left Alaska without ever setting foot in a boat or climbing a mountain. Might this become typical for future would-be river floaterswhen the glaciers are gone?

We spent what was left of the day measuring discharge and collecting water chemistry and invertebrate samples. That night we debated our options, and by morning we had scrapped our plans to travel by river in favor of arranging air transport to our next sampling site, 20 miles downriver. That site was in

the foothills of the Brooks Range and is one of the most important Dolly Varden overwintering and subsistence fishingsites on the North Slope. In the spring, Dolly Varden migrate from overwintering areas to feed in estuarine and marine waters. In late summer, glacial meltwater provides enough discharge for these fishto swim back upstream to their spawning and overwintering habitats. Fifty years from now, if glacial meltwater ceases to flow,these fish may not be able to return to these overwintering habitats.

Farther downstream, the Hulahula River crosses the Arctic Coastal Plain and forms a silty delta where thousands of shorebirds feed prior to migration. Both glacier-fed and non-glacial river deltas support marine invertebrates transiently when they wash up during storm surges. These invertebrates are an important energy source when they're available, but their occurrence is unreliable. Glacier-fed river deltas in this region, however, also support year-round populations of freshwater invertebrates that shorebirds can reliably feed on. Deltas that are not fed by glacial rivers may be sandier and more saline, and lack freshwater invertebrates. Loss of glaciers will lead to less freshwater flowand reduced transport of glacial silt to river deltas, possibly resulting in a shift to a sandier delta substrate that does not support reliable food sources for premigratory shorebirds (Nolan et al. 2011).

In nearshore marine foodwebs, loss of glaciers will likely alter the quantity, quality, and timing of freshwater inputs to coastal ecosystems (Nolan et al. 2011). In turn, these changes could alter marine foodwebs. Glaciers may be a relatively important source of labile dissolved organic matter and soluble reactive phosphorus for coastal ecosystems during mid- to late-summer, when they contribute substantial volumes of water and sediment to downstream ecosystems. Loss of glaciers will lead to reduced input of fresh water and its associated constituents. Changes in the availability of labile nutrients will alter microbial and/or metazoan foodwebs and could ultimately lead to decreased assimilation of terrestrial carbon sources by higher trophic levels, including important subsistence species such as Arctic cod and Dolly Varden.

Ironically, the low water levels we experienced during our trip were related to unseasonably cold temperatures causing lack of glacial melt, but may have been a foreshadowing of what future warming may bring by accelerating melt and resulting loss of these glaciers. We wonder what the future holds for the fishand wildlife of the Hulahula, as well as for recreationists, subsistence users, scientists and land managers. The establishing purposes of the Arctic Refuge include maintenance of adequate water quantity and quality to support fishand wildlife populations and habitats in their natural diversity, and to provide opportunities for continued subsistence uses. Will the refuge be able to meet these purposes without the meltwater that flowsfrom these glaciers?

We are now working with a multidisciplinary team of ecologists and physical scientists to predict impacts of glacier loss on physical and biological conditions from headwaters to lagoons. Understanding and predicting these impacts will allow managers to make better-informed decisions, evaluate the potential for additive and synergistic effects of other stressors (e.g., development along borders, increased shipping in the marine environment), develop strategies for reducing the impact of those stressors, prioritize land protection efforts, report on the status of key indicator species, mitigate effects on threatened and endangered species, and form critical conservation partnerships at local, regional and global scales.

Our minds drift away from such thoughts on our last night along the Hulahula. For hours we watch the midnight sun arc across the Arctic Coastal Plain as the river trickles by. Small bands of caribou move through the valley and we spot a lone wolf. Tomorrow we will fly tothe oilfieldcomplex at Prudhoe Bay and then on to Fairbanks, but all that seems a world away from this place. When the glaciers are gone this valley will change, but the magic of this wilderness will remain.◆

References

Nolan, M., R. Churchwell, J. Adams, J. McClelland, K.D. Tape, S. Kendall, A. Powell, K. Dunton, D. Payer, and P. Martin. 2011. Predicting the impact of glacier loss on fish,birds, floodplains,and estuaries in the Arctic National Wildlife Refuge. Pages 49-54 in C.N. Medley, G. Patterson, and M.J. Parker, eds. Proceedings of the Fourth Interagency Conference on Research in the Watersheds. USGS. Scientific Investigations Report 2011-5169

DOI Watercraft Training Update

by Jake Schlapfer

The Department of Interior (DOI) watercraft training departmental manual was updated in late 2011, and it is available for viewing here: http://training.fws.gov/EC/Resources/MotorBoat/mocc.htm

The Motorboat Operator Certification Course (MOCC) gives participants the training required to permit operation of DOI-owned watercraft. This update reviews the minimum requirements for safe operation of motorboats and includes a review of legal requirements, preparations, navigation, operations, emergency procedures, rescue, self-rescue, trailering, firesuppression and basic seamanship.

The DOI Watercraft Safety Workgroup is made up of representatives of DOI cooperating agencies. This group reviews and publishes a variety of watercraft modules to include:

- Basic Motorboat Operations
- Non-motorized Watercraft
- Airboat Operations (summer and winter)
- Motorized Moving Water Module (jet boats)
- Open Water Module

Other modules currently being beta tested are:

- Gear Over the Side: how to best operate or retrieve heavy gear like nets and monitoring equipment that can compromise watercraft stability; and,
- Paddle Craft: addressing intensive paddling with an emphasis on open water kayaking. This course is in cooperation with the National Oceanic and Atmospheric Administration (NOAA).

For further information, contact your agency watercraft safety lead or safety manager.◆

Keeping the Fortymile *Wild*

by Jevin Hoeper

The spread of invasive plants is a problem that the State of Alaska faces year in and year out. Not only are invasive plants spreading in our cities and towns but they may now be encroaching into the backcountry of Alaska. The main source of the spread of invasive plants is us, human beings. It is very difficultto assess the impact invasive plants may or may not be having on the backcountry of Alaska, which results in insufficientdata on whether or not invasives are indeed spreading to these remote areas.

The areas that have been most heavily surveyed are along the roadsides and within the cities and towns of Alaska. These areas are the most accessible and, due to the consistent human activity and disturbance, are more prone to the occurrence of invasive plants. It can be speculated that it will not be long before these invasive plants make their way into the backcountry of Alaska. The first stride towards resolving this problem is to determine the severity of the spread of invasive plants into the backcountry by performing invasive plant surveys. Due to the vastness that is Alaska's backcountry there are countless areas to perform surveys. The region of Alaska that was focused on was the Fortymile River corridor. The human impacted areas along the banks of the river between the South Fork Bridge Wayside and the Fortymile Bridge, which are both located on the Taylor Highway, were the main emphasis of the survey.

The Taylor Highway has been surveyed in the past and was found to have several invasive species growing along the sides of the road, the most prevalent being Hordeum Jubatum (foxtail barley). There has been a growing concern that invasive plants will soon make their way from the Taylor Highway to the banks of the Fortymile Wild and Scenic River.

In order to perform the survey, a trip from the South Fork Bridge to the Fortymile Bridge was performed by raft and inflatablecanoes. The trip consisted of two BLM volunteers and a BLM Botany technician. The trip took fivedays and included numerous stops along the river. This particular area of river was selected for the survey because of its proximity to the Taylor Highway and the large number of people that inhabit its banks throughout the summer months. The human presence on the South Fork of the Fortymile River consists of recreationists, short-term campers, and gold dredge miners that occupy the river via long-term campsites throughout the summer months. Whether it is a cleared trail, a road, or a campsite, heavily used areas are more susceptible to invasive plants. The areas that were surveyed most heavily were the short-term and long-term campsites that were along the banks of the river.

Foxtail barley

The survey of the river found that the current presence of invasive plants along the river is low. Only one of the sites that was surveyed showed signs of the invasive plant foxtail barley. This sight was located at the end of Rainbow Road, which runs down stream along the South Fork River from the South Fork Wayside. It was determined that the reason for the presence of invasive plants at this sight had to do with accessibility. This site can be accessed on foot or by ATV from the Taylor Highway, making it a prime area for invasive plants to inhabit.

The survey showed that the spread of invasive plants has yet to reach the more remote areas of the Fortymile River; however it did show signs that as places become more accessible the probability of an invasive plant species moving in is greatly increased. It is only a matter of time before the invasive plants make it further down river. It is up to the people that utilize the river and its resources to protect it. A few easy ways to help protect the river from invasive plants would be to follow the "Leave No Trace" principles, to clean all equipment before taking it down river, and to notify the proper authorities if an invasive plant is found in the backcountry. ◆

Jevin Hoeper is a volunteer with the Student Conservation Association.

Canadian Chapter News

by Michael Greco

At a time when government and private sponsorship budgets are being cut and money seems to be getting tighter, it is very encouraging to see a number of people stepping up and deciding to take matters into their own hands, cutting down on their reliance in having to beg for outsiders to provide the financial backing to help them do what they think must absolutely be done, and done rather quickly, without any more excuses for delay, especially when it comes to environmental matters which they feel are now at the tipping point of no return. Rightly or wrongly, we see it in the newspapers almost daily with the crusaders against the 1%, in "Occupy City" protests across North America, with the "Anti-Pipeline" protesters comprising many Native peoples and citizens firmlyopposed to the construction of the Northern Gateway and Keystone Pipelines from Northern Canada all the way to the Texas refineries,in the protests against the Alberta Tar Sands for their negative effects on air and water, and in the protests against anything that is somehow associated with potential damage to our air, water or soils.

Along those same lines, we have seen a number of new groups emerging to provide a source for building a hopefully unbiased, objective, scientific-knowledge base, particularly with regards to monitoring and then developing solutions to reverse any perceived, negative trends in North America's environmental health. In Canada we have seen a few such newer developments.

RMS Canadian Chapter members Frederick W. Schueler and Aleta Karstad of the Bishops Mills Natural History Centre are pleased to report that they attended the Canadian National Invasive Species Forum with the support of the Canadian Chapter which paid their registration fee. The National Invasive Alien Species Forum was held in Ottawa, Canada, February 28 and 29, followed by workshops on March 1st. The event provided a special opportunity to network and collaborate with colleagues from across Canada on topics including: 1. Prevention; 2. Early Detection and Rapid Response; 3. Information Sharing and Management; and, 4. Building National Collaboration. For more details visit: http://www.invasiveplantcouncilbc.ca/images/stories/documents/events_docs/NISForum_RegistrationForm_e.pdf or http://www.invasiveplantcouncilbc.ca/special-events/national-invasive-species-forum.

Jay Morrison, a veteran companion paddler and co-author with RMS member Max Finkestein, reports that Paddle Canada, formerly the Canadian Recreational Canoeing Association, is expanding its reach and activities to include many such environmental projects. For example, they have taken on a co-Chair position with James Raffan, Executive Director of the Canadian Canoe Museum located in Peterborough, Ontario (where Paddle Canada also intends to relocate), to launch Canada's first"National Paddle Week" in June 2012. Even more significant,many Canadian environmental groups are now coming together as associates within a new Rivers Alliance devoted to "a world of healthy river ecosystems across Canada." (http://ontarioriversalliance.ca)

An older group, the Canadian Environmental Network (CEN) has been working on projects of this nature for the past 35 years. They just lost all their federal funding to do so, including three major watershed monitoring projects, worth $350,000 each, over a three year period, which had only recently gone out to bid. Cancellation of this funding program effectively wiped out some 650+ long-term, on-going environmental projects across Canada, and is a serious concern to all Canadians, especially those devoted to environmental causes. Contact: Ontario Environment Network (OEN), P.O. Box 1412, Station Main, North Bay, ON P1B 8K6, Tel.: 705-840-2888; http://www.oen.ca: The OEN is an affiliatenetwork of the Canadian Environmental Network . Please visit their web site at http://rcen.ca.

Now is a crucial time for RMS members to play their own personal but very important part in this movement in support of healthy rivers for our two nations.◆

Welcome
New RMS Members

Professional

Tamara Naumann, Botanist,
Dinosaur National Monument, CO

Megan Hooker, Stewarship Associate Director,
American Whitewater, OR

Matthew Heath, Student,
Georgia State College and State University, GA

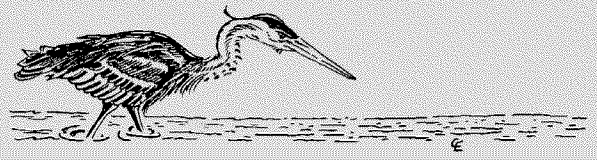
Associate

Jim Ledbetter, Owner, Gordon's Cleaners, TN

Jane Polansky, TN Scenic Rivers Administrator,
TN State Parks, TN

Lifetime

Gerrish Willis
Angela Wadman
Harold Belisle
Maile Adler



From Alaska, with love

by Melissa Blair

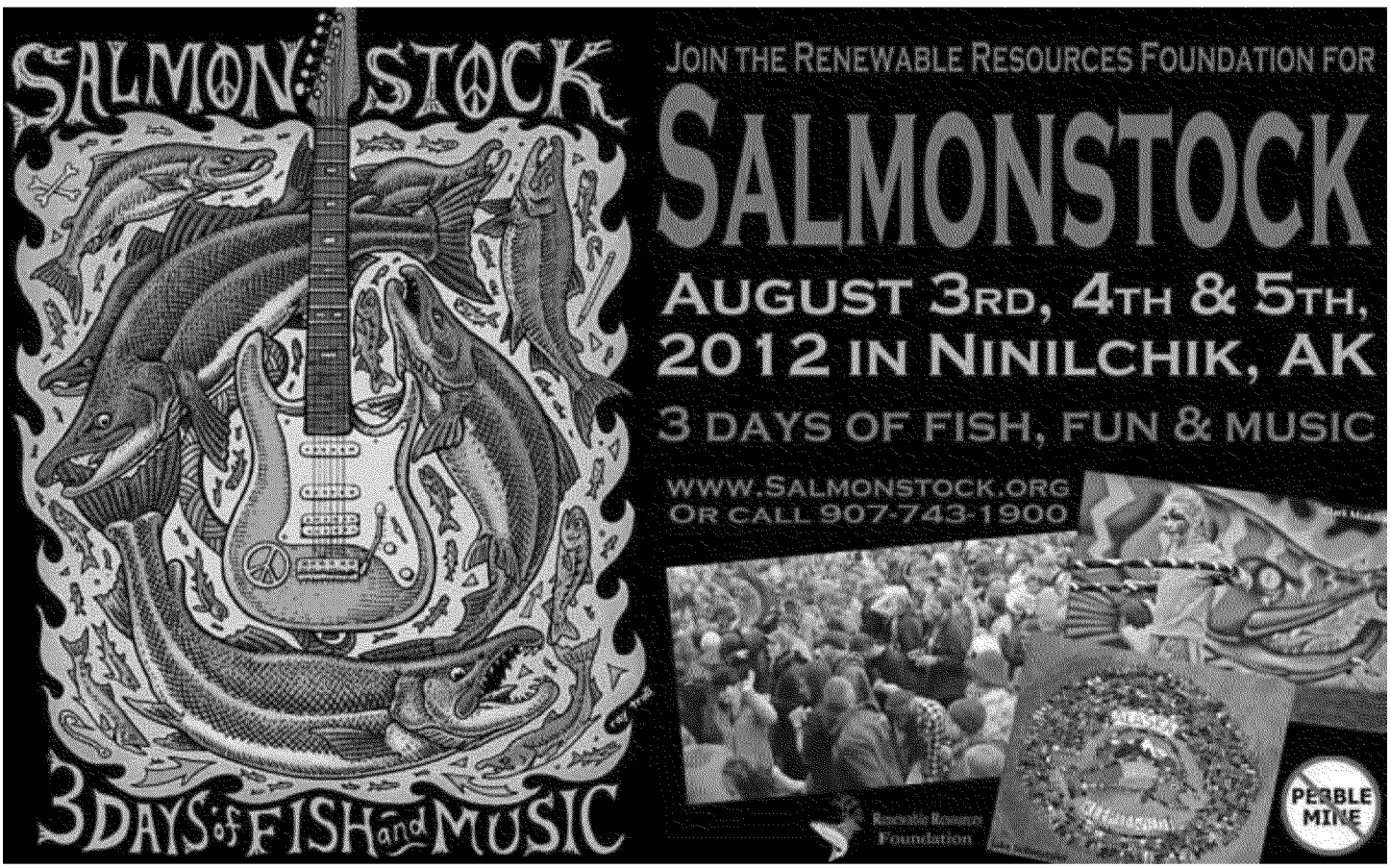
Thank you and high fivesto all the contributors to this Alaska-focused edition of the RMS Journal! RMS Alaska chapter members and many finefolks who study, manage, and protect our wild rivers rallied during this winter's dark and snowy months to submit a wide array of articles to the Journal. The variety of topics reflecta snapshot of Alaska's rivers today, our accomplishments and adventures, issues and trends, as well as highlight the professionals and youth whose passion and dedication bodes well for the future of river stewardship. After all, Alaska's vast, intact watersheds and landscapes represent one of our last great chances to get our river management practices right the first time. Again, thank you!

Soliciting articles for the Alaska-focused RMS Journal every year and a half is definitelyone of my favorite presidential chores. It gives me an opportunity to reach out one-on-one to colleagues and friends in far flungcorners of this state, to catch up on the latest news and weather in your world, to brainstorm article ideas and river workshop destinations for the upcoming summer season, and so much more. I'm reminded of how rewarding the networking, support and enjoyment I've found in RMS has been to me professionally and personally, why I volunteered to serve as an officer, and why I'll remain a lifetime member of RMS.

As I prepare to hand over the reins of the Alaska chapter leadership this year, I am encouraged to see a couple folks already volunteering to serve as officers. As you flipthrough the pages of this issue, I hope that you will be inspired to consider running for a chapter officerrole, too. More volunteers are needed! Stay tuned for more details about our upcoming Alaska chapter election and 2012 chapter activities via e-mail.

2012 kicked off with one of the coldest January's yet for many parts of Alaska, some towns buried deep in snow, aurora borealis shows, and even a Russian tanker helping an extreme ice-breaking mission to deliver fuel to Nome. "During the early weeks of January, Cordova had more than 18 feet of snowfall, with snowdrifts up to 12' to 14' high, requiring the National Guard to help dig out the town. The heavy snowfall put Valdez on a pace to break their previous snowfall record, ending with 293.8 inches of snow, which is 27.9" less than the average amount for the whole winter season," according to the University of Alaska Fairbanks' Alaska Climate Research Center.

With all this snow and ice, I can't look forward to summer without imagining what spring break-up might look like this year. Will we see nice and gentle thaws or scouring floods?Either way I wish you luck, look forward to seeing you on the water, and hope you'll join the fun to celebrate Alaska's clean waters and wild salmon August 3-5 at Salmonstock! www.salmonstock.org ◆



Southeast by Mary Crockett

It is here! Springtime in the Southeast, and especially in Appalachia, is in full bloom! Steve Hendricks, Karen Cragnolin, Risa Shimoda and I give you an invitation to come join us in Asheville, North Carolina, for the National River Management Symposium – *"from intimate creeks to the infinitesea,"* April 24-26th. Plan to come early on Saturday to ride the wild Cheoah River and on Monday to attend a WSR workshop, or help us raise funds by playing golf or tennis.

I would like to take this time to thank all those who helped make this possible, especially these committee chair persons: Jeff Duncan for putting together a great program, Kevin Colburn for coordinating all the great fieldtrips, Zelime Lentz for all the food, banquet and hospitality , Denise Snodgrass for arranging the transportation, Bunny Sterin and Risa Shimoda for the great symposium gift, Dan Haas and his many volunteers in the merchandise and auction room, Gary Marsh and Randy Welsh for organizing the fundraisers, and Bunny Clarke and Lee Larson for keeping up with the funds.

We ask that if you plan to join us in Asheville, please bring a silent auction item to donate. This can be anything from your area of the country such as a book(s), basket of eatable items, bottle of wine, or any river related item of interest. Bring your credit card and/or check book as we will have five(5) special big ticket items that will be placed in a live auction at the banquet event on our last night together.

We have a great keynote speaker, Paul Greenburg, lined up for the firstday and he will also be available to sign your Four Fish book(s). We will have books for purchase, or if you have already read his book, bring it along for him to sign. Paul is touted as an incredibly gifted speaker and storyteller with a knack for demonstrating the relevance of river management to human society and the future of truly wild fish;he has been featured on NPR's *Fresh Air* with Terry Gross.

We will also have Rebecca Wodder, Senior Advisor to Interior Secretary Ken Salazar, speaking about how the government is working on the America's Great Outdoors initiative. Dave Cooper and Larry Gibson will be speaking about mountain top removal and how this practice is affecting the management of our rivers, plus many more wonderful speakers and panelists throughout the week. So, come and join us!

Both RiverLink and the SE Chapter of the River Management Society would like to thank everyone for supporting this event, and we look forward to seeing you all in Asheville. ◆

Southwest by Greg Trainor

The geographic region that makes up the boundaries of the Southwest Chapter is always a place ripe for controversy, prompted by tough, region-wide water allocation decisions, where projected demands for water in the next two generations are expected to exceed supplies.

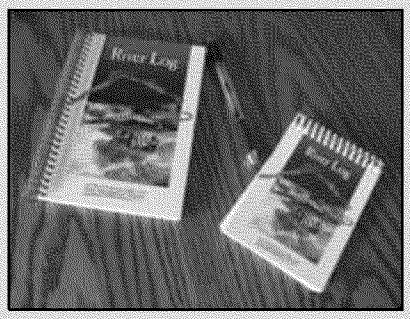
I just returned from a three-day winter conference sponsored by the Colorado Water Congress. The Colorado Water Congress is the "trade" organization for most of the domestic and agricultural water providers in Colorado. Here is a sampling of the "big picture" topics discussed, all centered around answering the region's two biggest questions:

How much water have we got? How will that water be used?

- Colorado River Basin — "Law of the River"
- Climate change and drought
- Interim shortage guidelines for coordinated operations between Lakes Powell and Mead (to insure that 1922 Colorado River Compact decisions are met between the upper basin and lower basin states in this period of extended drought)
- Intentionally created surpluses (efforts to add or conserve water in the Colorado River system through fallowing of agricultural lands, deliver system improvements, Tamarisk eradication, cloud seeding, and desalination)
- Water conservation as a significant measure to close the demand/supply gap by 2050
- Water 2012, Colorado's Year of Water, "helping Coloradoans connect with their water…"
- How are projected deficits(gaps!) between supply and demand going to be met? Conservation? Agricultural to city water transfers? Reduced water for energy development? Reduced water for recreation, in-stream flows, and other environmental purposes? (not just in Colorado, but throughout the Colorado River basin)
- Proposal to pump water from the Green River at Flaming Gorge Reservoir (in northeast Utah) to the Front Range cities of Colorado for drinking water (a similar idea is brewing on the Yampa River)
- Approval by the Utah State Engineer for 53,000 acre feet of water from the Green River for a proposed nuclear power plant at Green River, Utah
- "Dust-on-Snow" impacts in Colorado's San Juan mountains from dust storms rising out of NW New Mexico and NE Arizona.
- Review of Craig Child's book "House of Rain," an examination of Chaco Canyon, its pre-history, and impacts of water (or lack) on the rise and fall of that civilization.

In addition to the policy level discussions just mentioned, there are many other issues brewing in the Southwest region: nutrient control and proposed standards on Colorado's rivers; Colorado State-wide ballot initiatives to invoke the "public trust doctrine" on Colorado's water resources; BLM's decision to establish a recreational permit system on the Ruby Canyon-Horse thief section of the Colorado River, west of Grand Junction, to control crowds, camping, waste, and fire;and increased attention and control of hydrologic "fracking" of oil and gas wells on the public lands in the West.

There is no shortage of topics and ideas. River managers, rangers, hydrologists, and research scientists (i.e. RMS members) are the shock troops in these discussions. They are the ones that can bring reality to the table—helping determine what will actually work, and what won't.◆



Welcome! New RMS Merchandise Coordinator

by Debbie Johnson

It is with great pleasure that I introduce you to the new merchandise coordinator, Dan Haas. While he's not new to RMS by any stretch of the imagination, he will bring plenty of creativity to marketing the quality products RMS has made available to you and river friends all over the US and Canada. Please give a warm welcome to Dan as he steps into his new role at the Asheville symposium… and don't forget to stop into the store and pick up an item or two!

A huge thank you to RMS also for the support you have given to me over the past six years. I've loved being a part of RMS and will miss seeing everyone at the workshops and symposia. I will still be out there spreading the good word about RMS. It's time to move on to the joys of grand parenting!◆

Lazybirds to play at 2012 RMS Symposium!

Lazybirds is a classic American band with roots in the Appalachian Mountains of North Carolina. Formed in 1996, the quartet began by immersing into the old forgotten styles of blues, jazz, country, and ragtime that had been the soundtrack of the American underground several decades earlier. The band quickly developed a reputation in the High Country for playing music that touches people at their core in a way that hearkens back to a time when music was more closely intertwined with nature. With Mitch Johnston on stand up bass and vocals, James T. Browne on drums and vocals, Jay Brown on guitar, harmonica and vocals, and Alfred Michels on fiddleand guitar, Lazybirds have created a sound that is all their own, at once familiar and original. Their latest CD, "Broken Wing" pays tribute to original band member, Andy Christopher. Loyal fans have danced through a decade and a half with the band at bars, festivals, weddings, and parties across the southeast. Much like the old New Orleans Jazz bands, Lazybirds keep on doin' their thing ... and every year, they do it a little better.◆

Contact Info:
magpie@lazybirds.net
www.lazybirds.net
828-262-9966

Pacific by Elaine Grace

First of all, a special thank you to all PacificChapter members (and non-members) who contributed gallantly to the Winter 2011 PacificFocus RMS Journal. Those contributors were Dianna Lynn Wulff, Margaret Gidding, Harry Williamson, Amy Lind, Sarah Yarnell, Megan Hooker, and Robin Schrock. Thanks to major efforts by Vice President Keith Brown, Secretary Scott Springer, and Treasurer Larry Freilich, the Pacific Focus RMS Journal "Rocked"!

I'm still looking for someone to take my place as PacificChapter President in time to attend the next annual board meeting in October 2012. This board of directors meeting will take place in Grand Junction, Colorado, on the shores of the Colorado River (think resort). We have fun and get a lot done during the board meetings, but the real fun starts after the meeting. I have been on several great trips after board meetings, including the Lower Salmon River (twice), the Middle Fork of the American River, and the St. Croix (Wild & Scenic) River.

I haven't started calling members within the PacificChapter yet, but I may be calling you soon. Please feel free to call me at (707)-587-7717 if you would like to get more involved with the PacificChapter of RMS by becoming a Chapter Officer. I would especially enjoy telling you about the pluses (and minuses) of being a Chapter President.◆

Wailua Falls, Kauai (where the opening to the "Fantasy Island" TV show was filmed).Notice the people at the top of the falls — how do you manage them? Photo: Elaine Grace

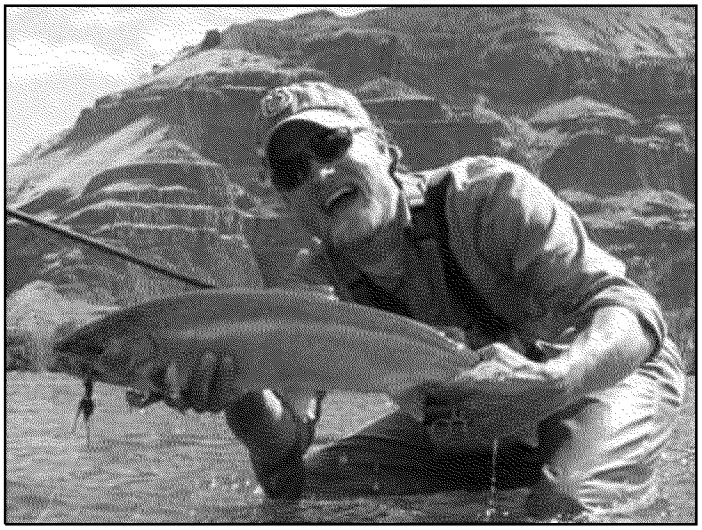
Northwest by Lynette Ripley

Meet your new team!

Welcome to your new Northwest Chapter OfficersTeam! As we embark on a new river ride together over the next three years, all members have a paddle in this boat as we head for the take-out with similar goals. Starting in 2012, we are your representatives for the next three years, and the message we are sending is we are all a team. It IS all about YOU as a member of River Management Society's Northwest Chapter and this is YOUR chapter. Our goal is to make contact with each Northwest Chapter member and discover where you would like your chapter boat to run. Climb aboard and be expecting to hear from us!

I am excited and hopeful about our new team of officerswho bring a fresh perspective and bright energy to our chapter. Each of us has river experience, but more importantly, we have passion for rivers and want to learn from each other as well as each of you. We are interested in passengers who want to ride the rapids with us, wet paddles in hand...lily dippers move aside!

I am hoping that you will take the time to get to know each of your officersas we are all looking forward to getting to know you. We are river folks just like you. Take a look at our biographies as authored by each of us:



Jim Beaupre

Jim Beaupre, Vice President

I have been an RMS member for several years and have had the opportunity to attend a River Ranger Rendezvous and three chapter floats,including leading a Lower Deschutes float when the Owyhee's raging floodwatersprevented safe passage. Rivers have given me many glorious days of fishing,floating and sunshine (along with many fishlessdays, flips,cold rain and snow). For that, I'd like to give back to RMS by being your Vice President for the Northwest Chapter!

I grew up in inner-city Indianapolis and from the start people knew I did not belong. Rather than hone my basketball skills like a real Hoosier, I was always found in the creek looking for snapping turtles or snakes. A high school fieldstudy to Colorado confirmedthat I did not belong in the urban jungle and the rivers and mountains were where I needed to be!

I graduated from Ball State University, majoring in Outdoor Recreation Management with a minor in Biology. I started my professional career as a Conservation Intern with SCA's Massachusetts Forests and Parks AmeriCorps teaching environmental education and completing trail work projects throughout the state. After a quick season as a Northwest Youth Corps trail crew leader, I landed in Bend, Oregon, doing seasonal work for Bend Metro Parks and Mt. Bachelor. One life changing day I was offered a job with the Bureau of Land Management on the Lower Deschutes River, and I have not looked back! I spent one summer as a Campground Ranger, two summers as a Float Patrol Ranger, and four years as a Lead River Ranger. The last two years I have been an Outdoor Recreation Planner with expanded duties in the recreation program and working with Special Recreation Permits. My "on the clock" river time has diminished but my passion for flowingwater has not.

Burket Kniveton

Burket Kniveton, Secretary

I am excited about being your Secretary for the Northwest Chapter! I feel that my past experience with RMS and my enthusiasm for rivers will suite me well in this position. Like many of you, rivers seem to be intimately intertwined with both my personal and professional lives.

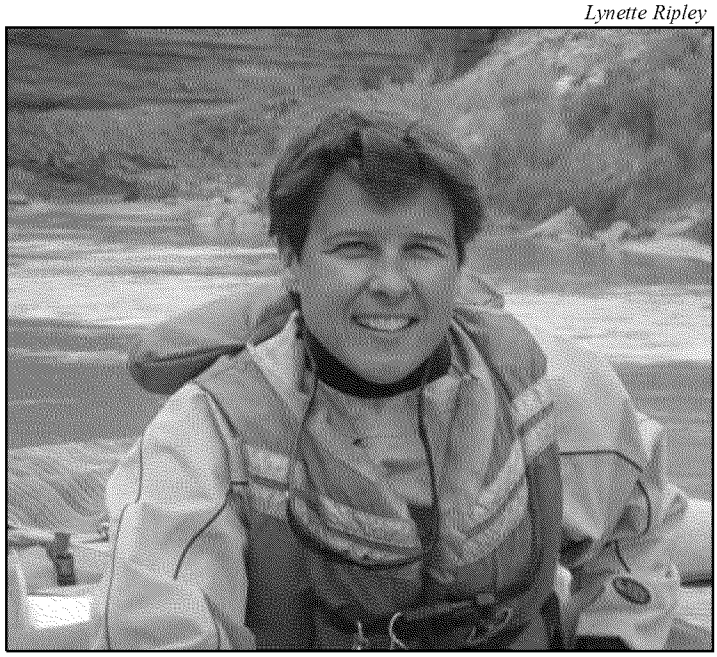
I am currently the lead River Ranger on the wild section of the Main Salmon River in Idaho. When not at work, I can most likely be found kayaking, fly fishingrafting or working in the garden. I firstjoined RMS as a student at Prescott College in 2007. Since then, I have attended a River Ranger Rendezvous and the 2010 symposium for which I received a Northwest Chapter internship award. As your officer,I look to bring new ideas to the chapter and re-connect the members by ensuring that engaging and fun chapter events occur. I look forward to meeting you all on the banks of a river in the Northwest soon!

Molly Wainwright, Treasurer

Since I began working in river management as an intern in 2004 on the Blackfoot River, my love for rivers has grown into a career. I have worked on the Blackfoot, Clark Fork (Alberton Gorge whitewater section), Madison, Beaverhead, Big Hole and Owyhee rivers. On each river, I have administered the river permitting programs and created great working relationships with commercial angling and whitewater communities, local landowners and other agency personnel. I enjoyed working in many facets with the permittees, such as conducting river clean-ups, meeting people in campgrounds and listening to their stories. Serving as your treasurer is of interest to me because of my love for rivers and the opportunities RMS has given me through meeting other river professionals, learning new management issues and finetuning my own skills. I love getting involved and helping out when needed. I am good at planning, organizing and communicating with everyone involved. I want to be an asset to RMS and our chapter because of my outgoing personality, willingness to jump in and help, and optimistic attitude.

Molly Wainwright

Lynette Ripley



Lynette Ripley, President

I have been a member of RMS for 10 years. Throughout the 10 years, I have been involved in RMS by serving on several River Ranger Rendezvous committees, helping organize chapter events such as river trips, attending RMS conferences and previously was the Chapter's Vice President.

My connection and passion for the outdoors and rivers began with me playing outside growing up in the farming belt of the Midwest in Illinois. There was not much to entertain one's self with miles of flatland, so I spent a lot of time outdoors creating my own fun. Amazingly I knew in the 8th grade that I would be a Park Ranger playing and working outdoors, and I was headed for Oregon to live. Dreams do come true when you go after them!

I graduated in 1986 with a Bachelors of Science in Forestry specializing in outdoor recreation from Southern Illinois University. In 1987, my career began with rivers as a Park Ranger for the US Army Corps of Engineers managing recreation and natural resources for 10 years on the Mighty Mississippi River in Iowa and Illinois. In 1997, I blew west to work for the Oregon Parks and Recreation Department for two years as a Park Ranger. In 1999, I acquired my dream job with the Bureau of Land Management as the Lower Deschutes and John Day Wild and Scenic River Manager for 12 years in Oregon. After a successful river management run on the busy Deschutes and John Day Rivers, I am currently the Recreation Manager for the Bureau of Reclamation managing nine reservoirs on the Deschutes, Crooked, Rogue and Tualatin Rivers in Oregon.

I am fortunate that my passion and career have allowed me to be directly involved in managing and protecting our great American Rivers, but more importantly, to manage the people who enjoy rivers as they recreate at the places they love. One must inform, educate and support the people and in return, the natural resources will benefit.After 25 years being a leader managing rivers and the people who enjoy them, I am excited about bringing leadership to the Northwest Chapter.

I could cite a list of accomplishments and volunteering that I have done throughout my career, but the bottom line is to "Do What You Love and Love What You Do" and do it well. I have found this to be true with the River Management Society as the organization has been a professional benefit,and more importantly a personal treasure. I look forward to serving as a leader for our Chapter and taking us where the members want to go.◆

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Shape the Future of Rivers

This year, RMS is celebrating 23 years of supporting, protecting, and managing North America's rivers. The RMS Board appreciates your support and our shared commitment to keep RMS financiallystable. The RMS mission is embraced daily by you who work on behalf of rivers and who answer the call to encourage professional growth among your peers, mentees, and supervisors. We all have benefittedfrom workshops, symposia, River Ranger Rendezvous, floattrips, chapter events, river projects, and volunteer efforts.

Your support has been, and continues to be, the heart and soul of this organization, and is invaluable in ensuring RMS has a positive and enduring impact. All of us need to think about our gift-giving and estate planning. Those of us on the Board hope you will reflecton what RMS has meant and continues to mean to you, and consider including RMS in your estate plan.

Update Your Estate Plan if:

You Have New Children, Grandchildren or Other Heirs
All of us want to provide for children and other heirs who depend on us. Avoid provisions that could result in unintended larger benefitto one or more beneficiaries,to the detriment of others.

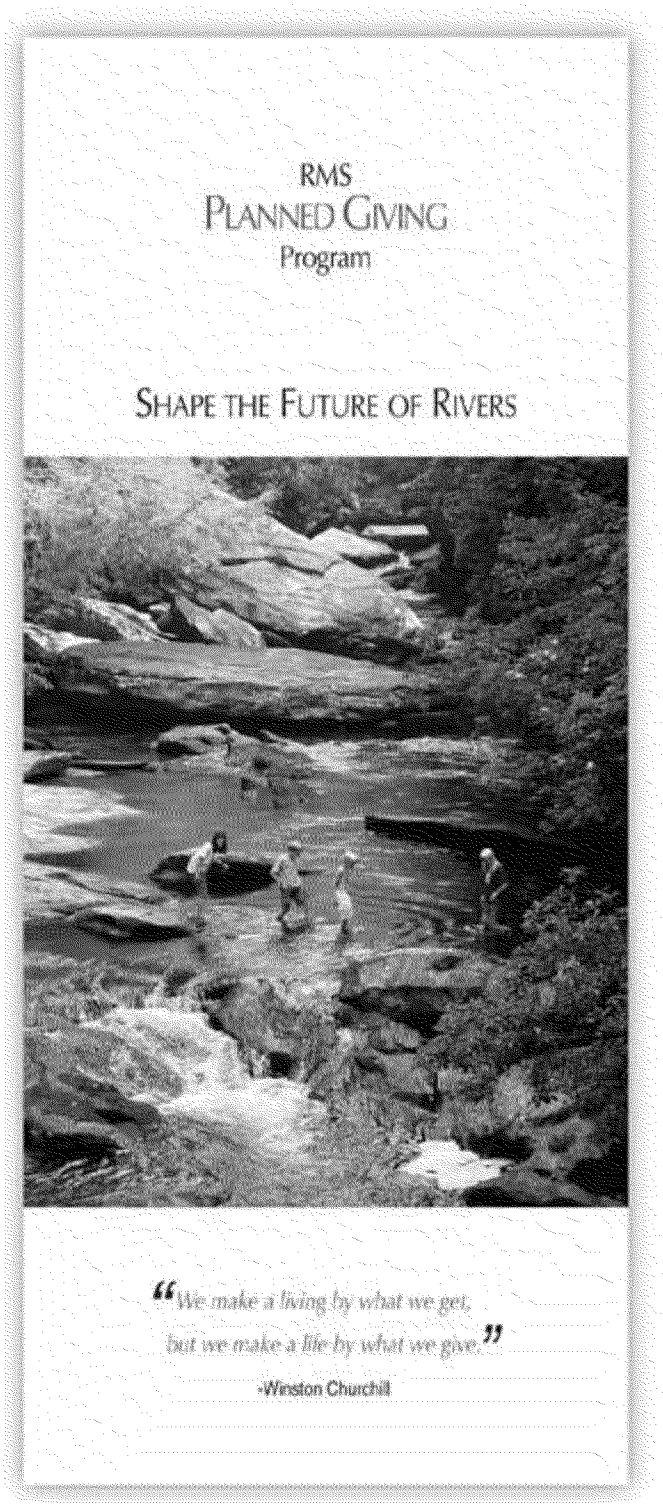
If you Move to a Different State
Update your plan to comply with state law.

If you Sell or Purchase a Major Asset
You may have a major real estate asset or a business that is to be transferred to one of your heirs. If that property is sold or substantially increases in value, your entire plan could change.

When You Reach Age 70½
Over the years, your qualifiedretirement plan may become a large portion of your estate. Your IRA, 401(k) or other qualifiedplan will require distributions to start in the year you reach age 70½. If you pass away before the entire plan is paid out to you during your retirement years, the balance is transferred to your designated beneficiary.

If You Divorce or Remarry
Update your will and your accounts with beneficiary designations so your new family is protected.

If Your Property Sees a Substantial Change in Value
If your estate increases or decreases significantlyin value, there can be major impact on beneficiaries.



"Some time ago my wife and I decided to designate the River Management Society (RMS) in our will. Why did we do that, you may ask. To me, this was a natural part of my financial and estate planning. By giving to the RMS, I personally believe it will help perpetuate a legacy for future generations of river managers."

— Gary G. Marsh

".. for God loves a well-motivated giver." 2 Corinthians 9.7

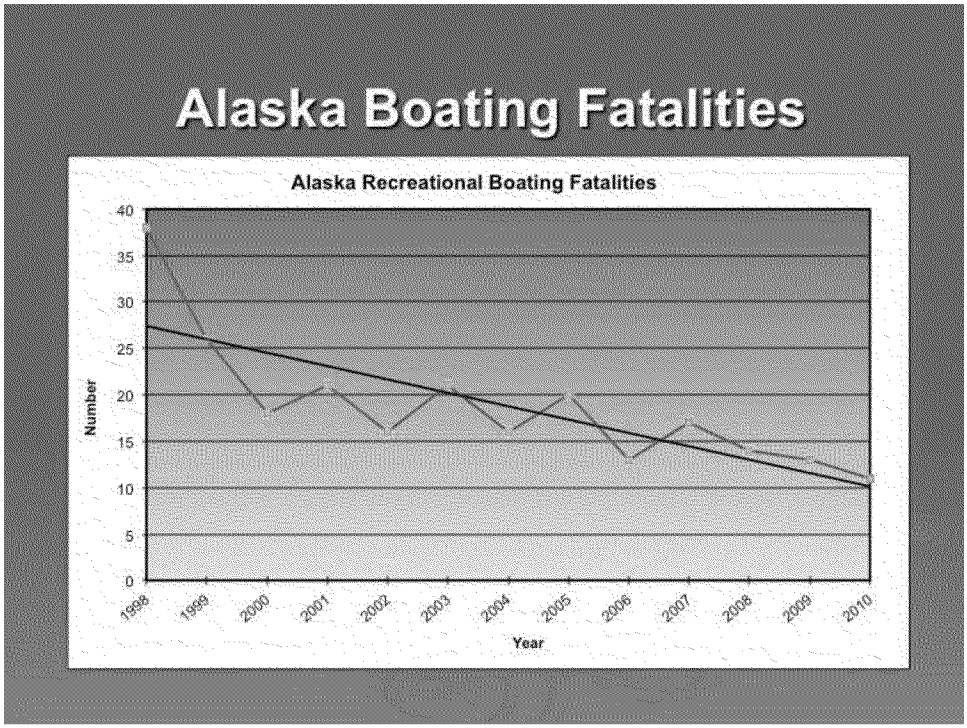
River Management Society

2011 Financial Report

Assets:			
Bank Accounts	15,000		
Savings Account	125,700		
Executive Director Fund	39,000		
Receivables Due on Contracts	5,600		
Total Assets:		**$185,300**	**2010 Assets: $191,600**
			2009 Assets: $100,100
Liabilities:			
Contracts	62,700		
Accounts Payable	0		
Other Liabilities	19,000		
Total Liabilities:		**$81,700**	
Equity:	$103,600		
Total Liabilities and Equity:		**$185,300**	
2011 Income:			
CFC	136		
Contract Receipts	123,600		
Membership Income	16,660		
Merchandise Sales	4,600		
Charitable Contributions	2,320		
Registration Fees	15,730*		
Miscellaneous Income	7,954		
Total Gross Income:		**$171,000**	
2011 Expenses:			
Personnel Costs	26,000		
Bank Charges	1,300		
Newsletter	19,500		
OfficeRent	3,000		
Accounting	1,600		
Website/Internet/Design	7,300		
Merchandise	1,100		
Postage	1,500		
Printing	100		
Telephone	1,500		
OfficeSupplies	3,100		
Insurance	2,700		
Awards	400		
Chapter Admin Expenses	1,700		
2011 Alaska Workshop	47,400 *		
Contract Pass Through	4,200		
Program Expenses	4,000		
Miscellaneous Expenses	4,420		
Total Expenses:		**$130,820**	
Total Net Income		**$40,180**	

**The 2011 Alaska Workshop both income and expenses are shown. Report submitted by Lee Larson, RMS Treasurer.*

*(**Boat Safe**, from page 7)*

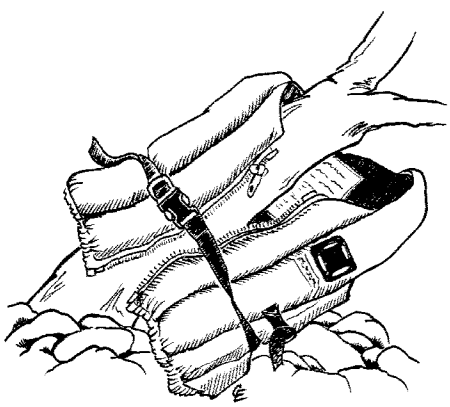


of Boating Safety has reached almost 90,000 children with its Kids Don't Float School Program and even though boating safety education is not yet required in Alaska (as it is in most of the Lower 48) approximately 7,000 boaters have taken a nationally certifiedboating safety course. In addition, the Officeof Boating Safety has provided instructor training, specialized presentations and embarked on a vigorous life jacket wear campaign. In 1998, when state efforts in boating safety began, 38 Alaskans died in recreational boating accidents. Since then, the number of fatalities has dropped steadily to a low of 11 in 2010. The program and staff has also been the recipients of several state and national awards. The National Association of State Boating Law Administrators (NASBLA) presented Jeff Johnson, boating law administrator of Alaska and past NASBLA president, with its prestigious Bonner Award for meaningful contributions to recreational boating safety both on state and national levels in 2008. In 2010 the program received NASBLA's Compass Award and the United States Coast Guard's Meritorious Public Service Award. The National Safe Boating Council recognized the state's educational efforts in 2009 with its Boating Safety Youth Program Award. The Officeof Boating Safety has also won several national media awards for its publications, brochures, posters and videos.

Since 1971, efforts by Congress, the U.S. Coast Guard, and individual states to address boating safety have helped cut the nation's non-commercial boating fatalities in half, even though boat ownership more than doubled over the same period. The U.S. Coast Guard estimates more than 27,000 lives have been saved.

The primary objective of Alaska's Boating Safety Campaign is to reduce fatalities. Other objectives include increasing the wear rate of life jackets and increasing the number of instructors on the state's registry as well as the number of participants in educational programs.

The program is designed for boaters on Alaska's waterways but because boating is such an important part of the Alaskan lifestyle, everyone is a potential boater, or has connections to one. Therefore the program seeks to reach the entire population. To keep the message broad, the Officeof Boating Safety conducts classes, sponsors the Kids Don't Float life jacket loaner program, hosts a web page, provides a variety of boating safety messages for radio and television, and produces videos, articles and publications including the popular Alaska Boater's Handbook.



While the program is intended for everyone, it is the male boater in a boat less than 26 feet who accounts for the majority of boating fatalities. This is one of the reasons Alaska developed an Alaska – relevant state boating course to attract this high-risk group.

Alaska is the second most culturally diverse state in the nation. By varying the program delivery methods the Office of Boating Safety seeks to impact as many boaters as possible. Classroom presentations use the lecture format as well as hands-on skills. A variety of media from publications to television ads are designed for both rural and urban Alaska. Outreach efforts and program content are customized for the intended audience. More information about Alaska's program can be found on its website www.alaskaboatingsafety.org.

"Knowledge and awareness are the starting points," said Joe McCullough, Alaska's Education Coordinator. "There's a lot we have to be proud of in Alaska, but the nation's highest – or near highest – rate of boating fatalities doesn't make the list. We know that no one's looking to die during a day on the water. By showing Alaskans how to minimize and manage the risks, we're working to reverse the trend and make our state's cold waters a safer harbor for boaters and anglers." ◆

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*(**Kongakut**, from page 19)*

excellent hiking conditions for our finalhike up a last mountain ridge. We enjoyed outstanding views, including the ice-studded Beaufort Sea clearly visible beyond the plains. The end of the mountains marked the end point of our journey. Like the majority of visitors to this river, we would not be continuing across the coastal plains to the coast.

On the day we were supposed to get picked up by bush planes, thick fog kept flightsgrounded. We were picked up the following day. When traveling in this area, delays are common. Having extra food and flexibletravel plans is recommended. The arctic is a land of extremes. It is not an easy place to visit, but in part, that is why it is such a special place. ◆

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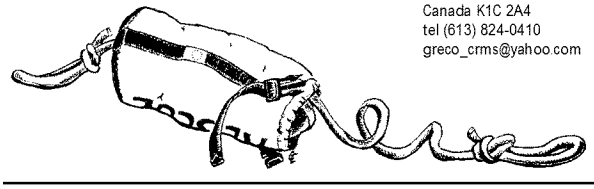

To Join RMS

Name _____

Home Address _____

City _____

State _____ Zip _____

Home Phone _____

Organization _____

Office _____

Work Address _____

City _____

State _____ Zip _____

Work Phone _____

Fax _____

Email _____

Job Title _____

Duties/interests _____

_____

_____

Rivers you manage _____

_____

_____

Membership Category (please check one)

- ❒ Professional $50/yr ($200 for 5 years)
- ❒ Associate $30/yr
- ❒ Organization $120/yr (government/corporate)
- ❒ Organization $60/yr (NGO/non-profit)
- ❒ Student $25/yr
- ❒ Lifetime $500 (for individuals only)

Who referred you to RMS? _____

Make checks payable to "RMS"
RMS also accepts VISA or Mastercard:
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Exp date:
Amount:

Send this form, with payment, to:
RMS, P.O.Box 5750, Takoma Park, MD 20913-5750
(301) 585-4677 • rms@river-management.org

River Management Society

RMS, P.O. Box 5750, Takoma Park MD 20913

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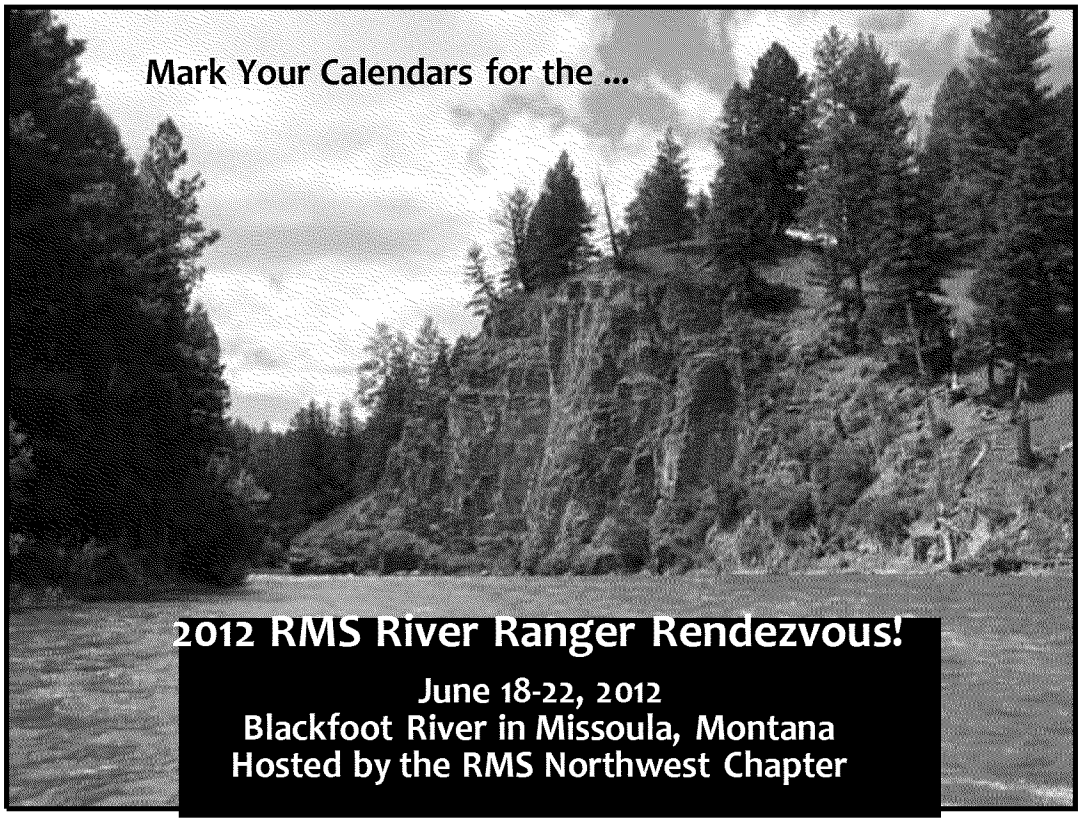
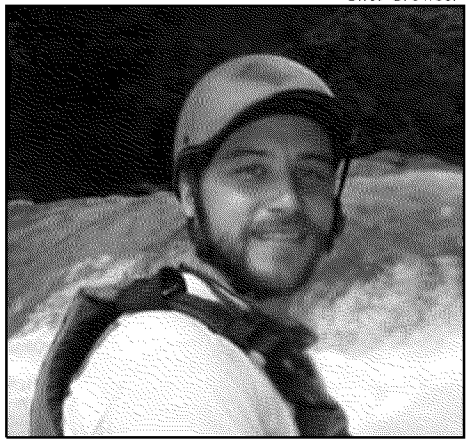
Next RMS Journal Deadline (Special Feature - Invasives): Submissions due May 1, 2012.



The River Ranger Rendezvous is an annual event open to all river rangers and fieldpersonnel (seasonal and permanent) to come together on the river and learn, share, experience and network about on-the-ground river issues we manage daily.

Chet Crowser, River Recreation Manager, with Montana Fish, Wildlife and Parks will be organizing this special event with his Rock Star committee. For more information, you may contact Chet at 406-542-5562 or email him at ccrowser@mt.gov.

Chet Crowser



June 18-19 – Swiftwater Rescue Training Course
June 20-22 – River Ranger Rendezvous Event

Stay tuned for more details (cost, agenda, logistics) coming soon!